



# **TPI Polene Public Company Limited**

**Opportunity Day, September 2 , 2022**



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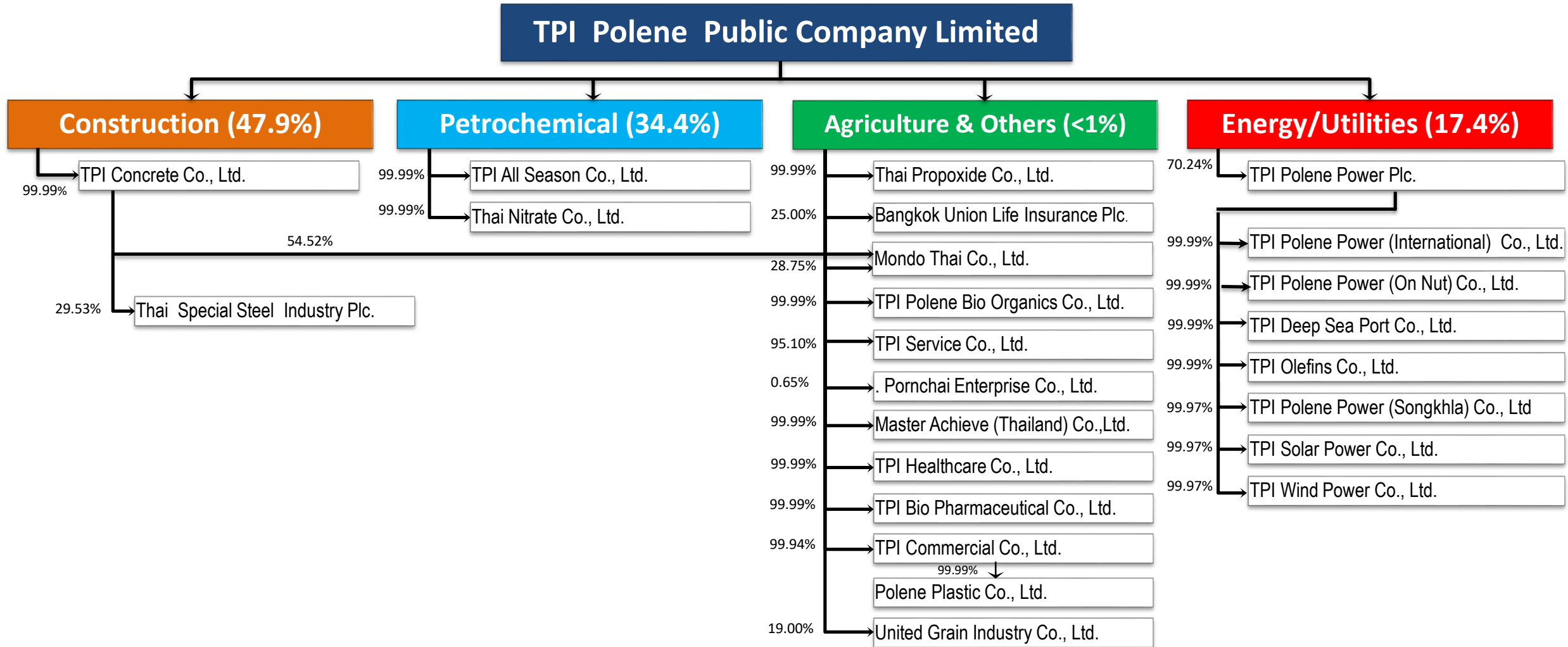
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# Section 1: The Group

# The Corporate Structure



# Our Products – Close to 5,000 SKUs



## 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.



**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**

# Financial Highlights



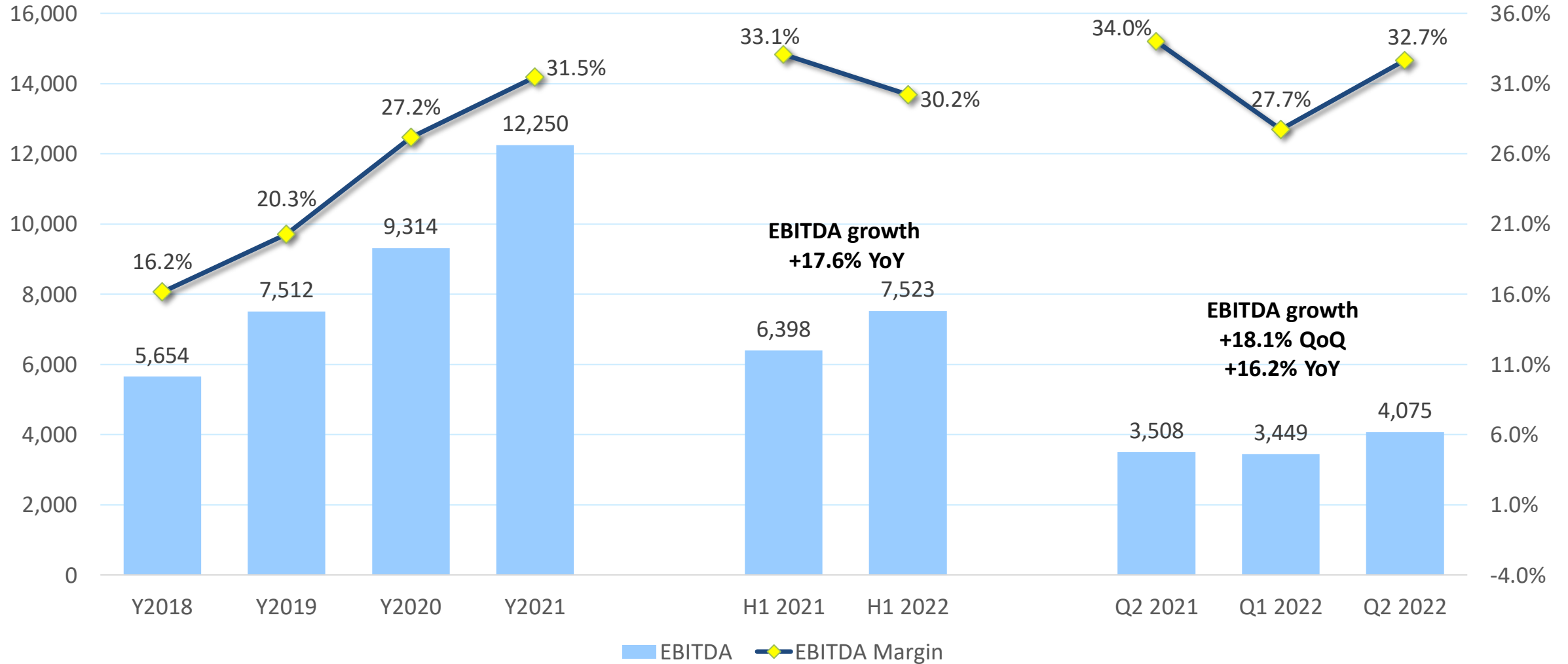
<b>H1 Year 2022 (THB m)</b>	<b>Sales Revenue</b>		<b>EBITDA</b>	
<b>Construction Materials</b>	<b>11,932</b>	<b>47.9%</b>	<b>1,923</b>	<b>25.6%</b>
<b>Petrochemical &amp; Chemicals</b>	<b>8,570</b>	<b>34.4%</b>	<b>3,317</b>	<b>44.1%</b>
<b>Energy &amp; Utilities</b>	<b>4,337</b>	<b>17.4%</b>	<b>2,256</b>	<b>30.0%</b>
<b>Agriculture</b>	<b>72</b>	<b>0.3%</b>	<b>24</b>	<b>0.3%</b>
<b>Other gains (losses)</b>			<b>2</b>	<b>0.0%</b>
<b>Total</b>	<b>24,911</b>	<b>100.0%</b>	<b>7,523</b>	<b>100.0%</b>





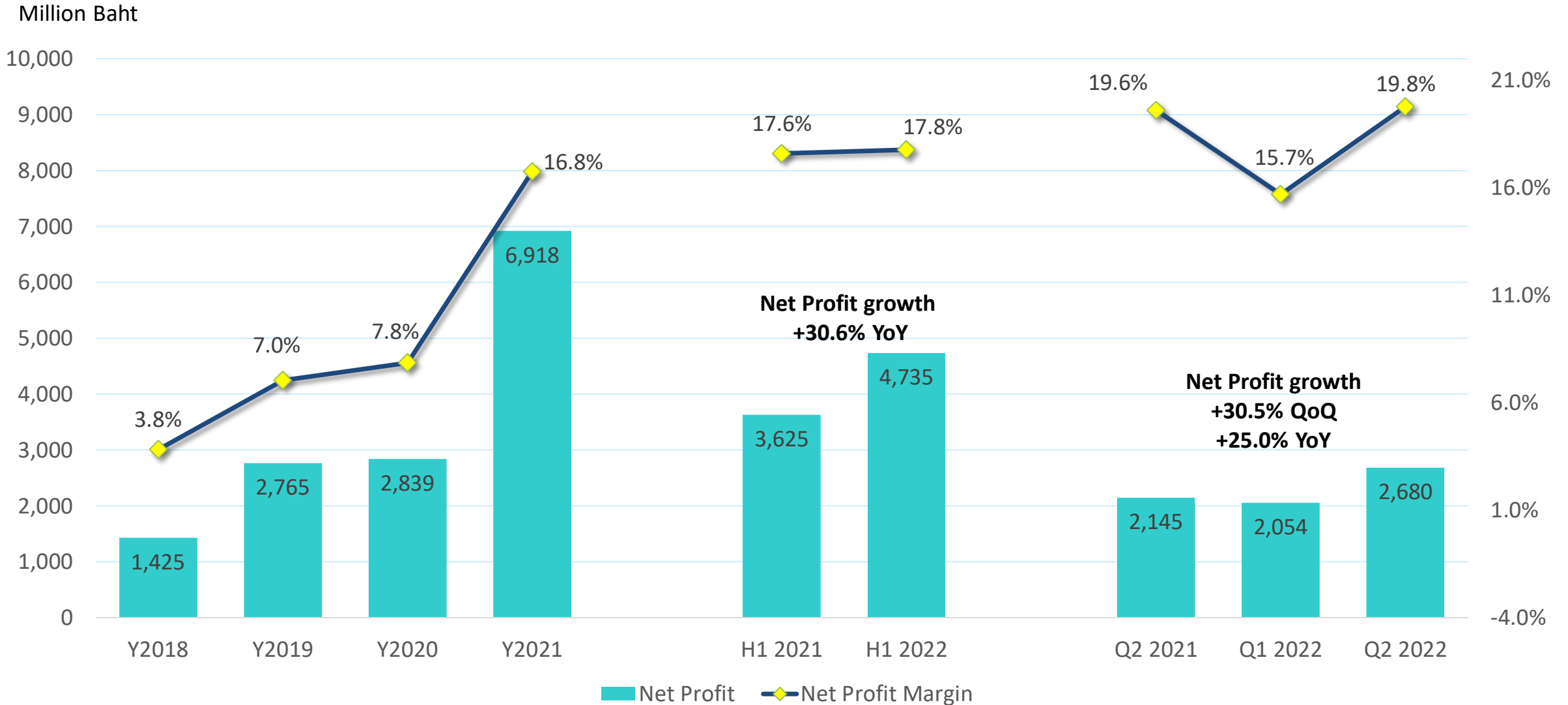
# EBITDA & EBITDA Margin

Million Baht





# Net Profit & Net Profit Margin







# Key Investment Ratios

As of June 30, 2022, except otherwise specified

Total Equity	60,465.73 MB
Total No. of share	18,935.24 M. shares
Book Value per Share	3.19 Baht/share
TPIPL Market Price (Sep 1, 2022)	1.68 Baht/share
Market Price / Book Value per Share (Sep 1, 2022)	0.53 Times
Earning per Share (H1 Y2022 Annualized)	0.446 Baht/share
Price Earning Ratio (P/E Ratio)	3.76 Times
Dividend per Share	0.09 Baht/share
Dividend Yield (Sep 1, 2022)	5.36 %
EBITDA (H1 Y2022 Annualized)	15,046.90 MB
Net Interest Bearing Debt (Net IBD)	55,315.51 MB
EBITDA / Net IBD	27.20 %
Net IBD / EBITDA	3.68 Times



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# **Section 2: Segment Highlights**

## **Cement, Concrete, LDPE/EVA, Nitrate Energy/Utilities**

# Snapshot of the segments 2Q22



THB m	2Q22	YoY	QoQ	% of Total	1H22	YoY	% of Total
Segment sales							
Construction Materials	5,916	29%	-2%	47%	11,932	32%	48%
Petrochemical & chemicals	4,319	28%	2%	35%	8,570	52%	34%
Energy & Utilities*	2,199	-5%	3%	18%	4,337	-5%	17%
Agriculture and Others **	42	-5%	41%	0.3%	72	-1%	0.3%
<b>Consolidated</b>	<b>12,476</b>	<b>21%</b>	<b>0.3%</b>	<b>100%</b>	<b>24,911</b>	<b>29%</b>	<b>100%</b>

EBITDA	2Q22	YoY	QoQ	% of Total	1H22	YoY	% of Total
Construction Materials	1,142	128%	46%	28%	1,923	82%	26%
Petrochemical & chemicals	1,786	20%	17%	44%	3,317	35%	44%
Energy & Utilities*	1,132	-25%	1%	28%	2,256	-22%	30%
Agriculture and Others **	13	82%	15%	0.3%	24	879%	0.3%
<b>Consolidated - incl other gains/losses</b>	<b>4,075</b>	<b>16%</b>	<b>18%</b>	<b>100%</b>	<b>7,523</b>	<b>18%</b>	<b>100%</b>

EBITDA margins	2Q22	1Q22	2Q21	1H22	1H21
Construction Materials	19%	13%	11%	16%	12%
Petrochemical & chemicals	41%	36%	44%	39%	43%
Energy & Utilities*	51%	53%	66%	52%	63%
Agriculture and Others **	31%	38%	16%	34%	3%
<b>Consolidated - incl other gains/losses</b>	<b>33%</b>	<b>28%</b>	<b>34%</b>	<b>30%</b>	<b>33%</b>

Profit before tax	2Q22	YoY	QoQ	1H22	YoY
Construction Materials	230	-167%	-302%	116	-118%
Petrochemical & chemicals	1,727	19%	18%	3,196	35%
Energy & Utilities*	863	-29%	0%	1,722	-25%
Agriculture and Others **	1	-242%	-1758%	1	-105%
<b>Profit before tax</b>	<b>2,822</b>	<b>22%</b>	<b>27%</b>	<b>5,035</b>	<b>25%</b>

Notes: \* TPIPP excl sales to TPIPL, \*\*Bio-organics, Bio-Tech, Bio-Pharma, Healthcare and others

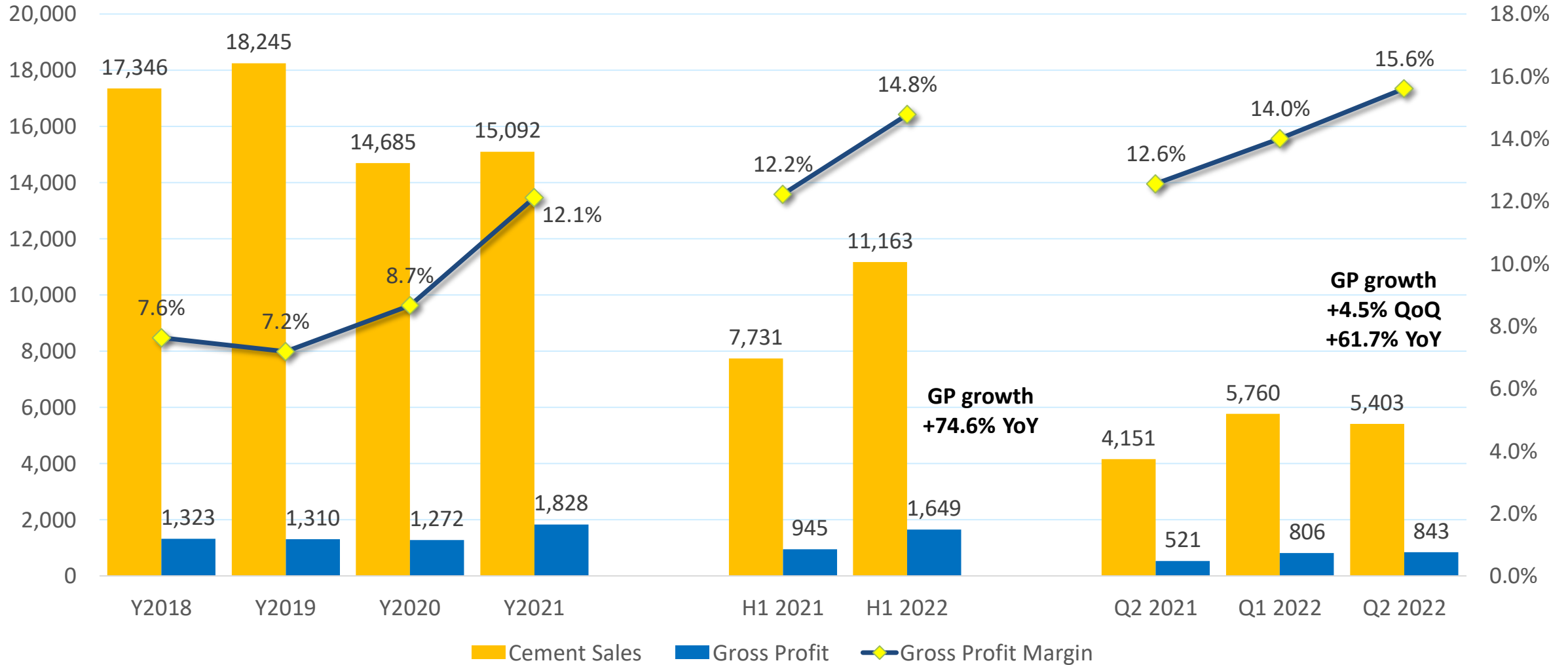
## 2Q22 highlights

- Construction material sales were up 29% YoY mainly due to price adjustments
- The EBITDA improvement is larger, +128% YoY, due to the high operating leverage nature of the business as well as ongoing cost savings and efficiency measures
- The Petrochemical & Chemical sales and EBITDA grew 28% YoY, 20% YoY, respectively, continuing to enjoy favorable prices and spreads. The high HVA bias of the product portfolio kept segment's margin high
- Energy and Utilities sales and EBITDA were down slightly on lower volumes and expiration of the adder for the 18 MW project.



# Cement - Sales Revenue & Gross Profit Margin

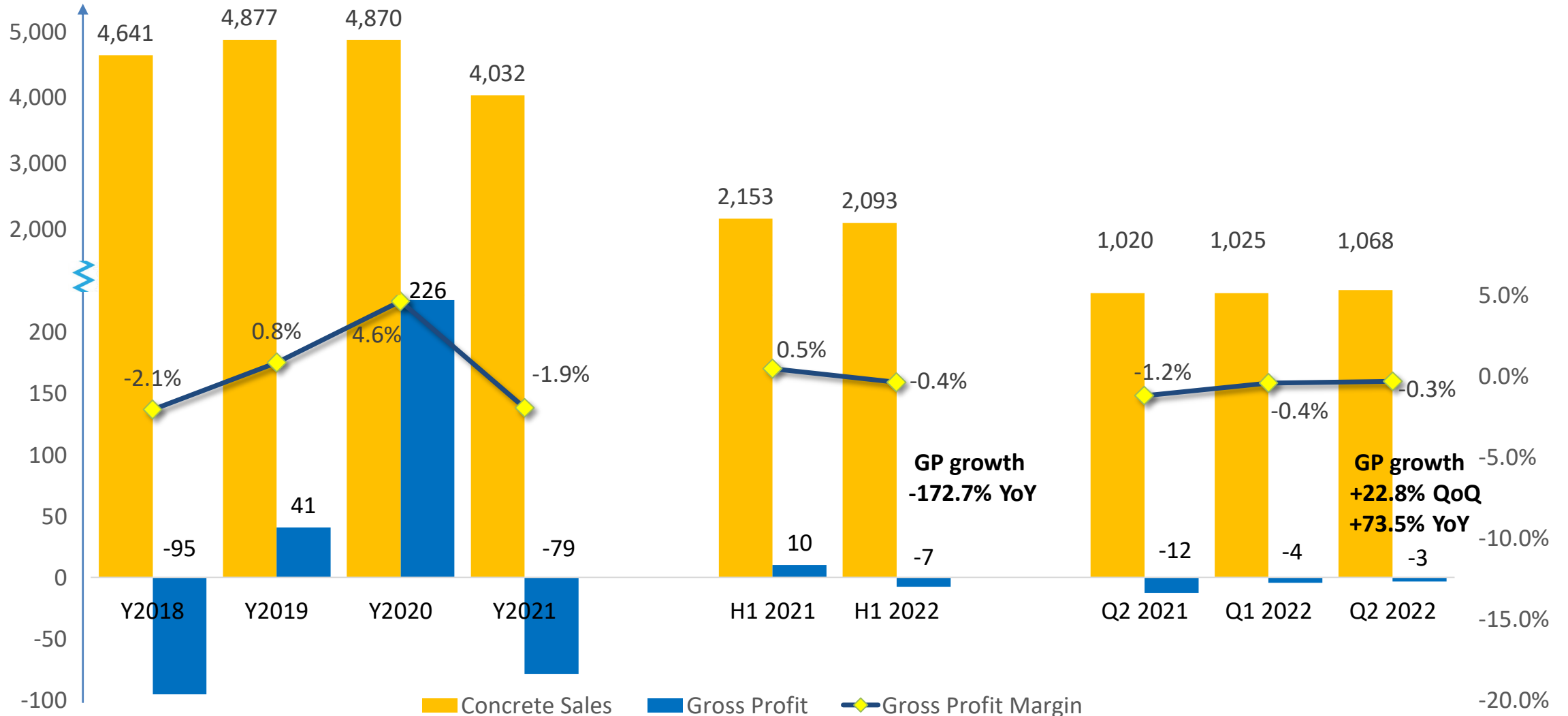
Million Baht





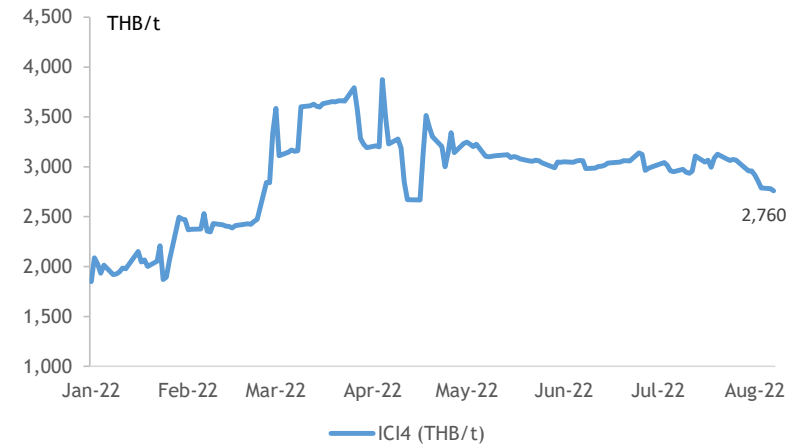
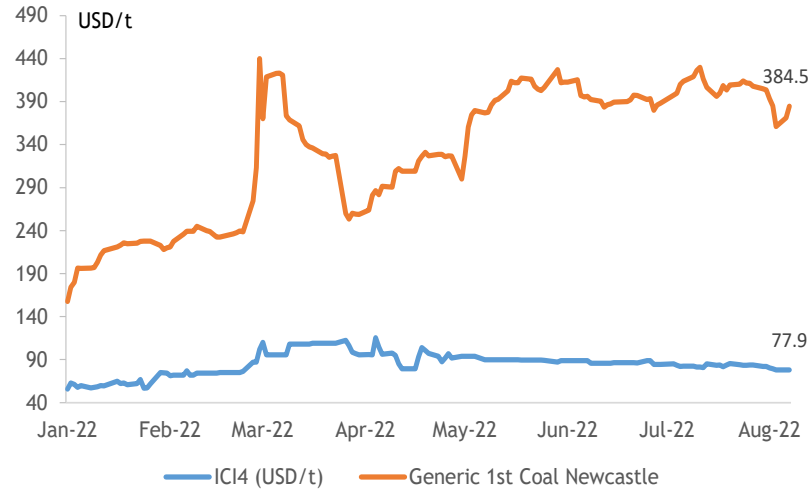
# Concrete - Sales Revenue & Gross Profit Margin

Million Baht



# Segment's most influencing factor

## Coal prices broke the range and started trading higher

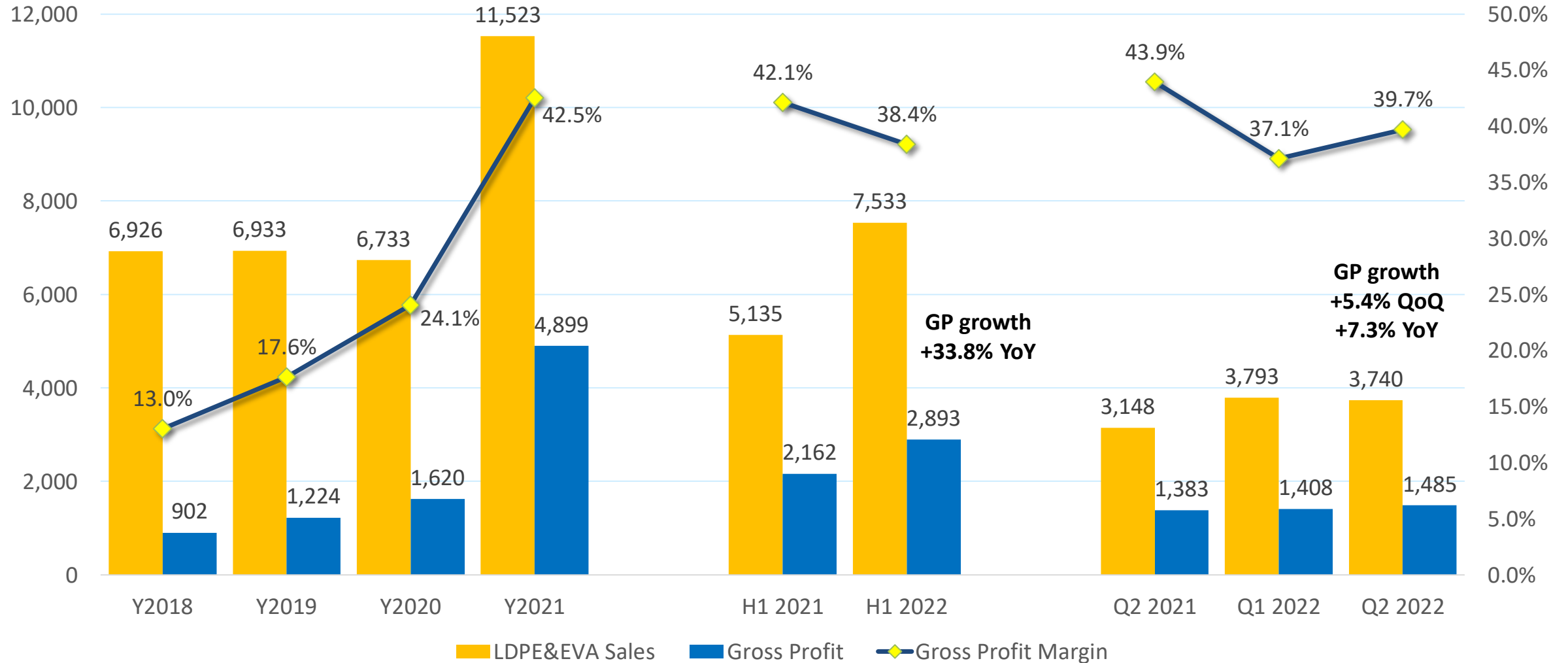


Source: Bloomberg



# LDPE & EVA - Sales Revenue & Gross Profit Margin

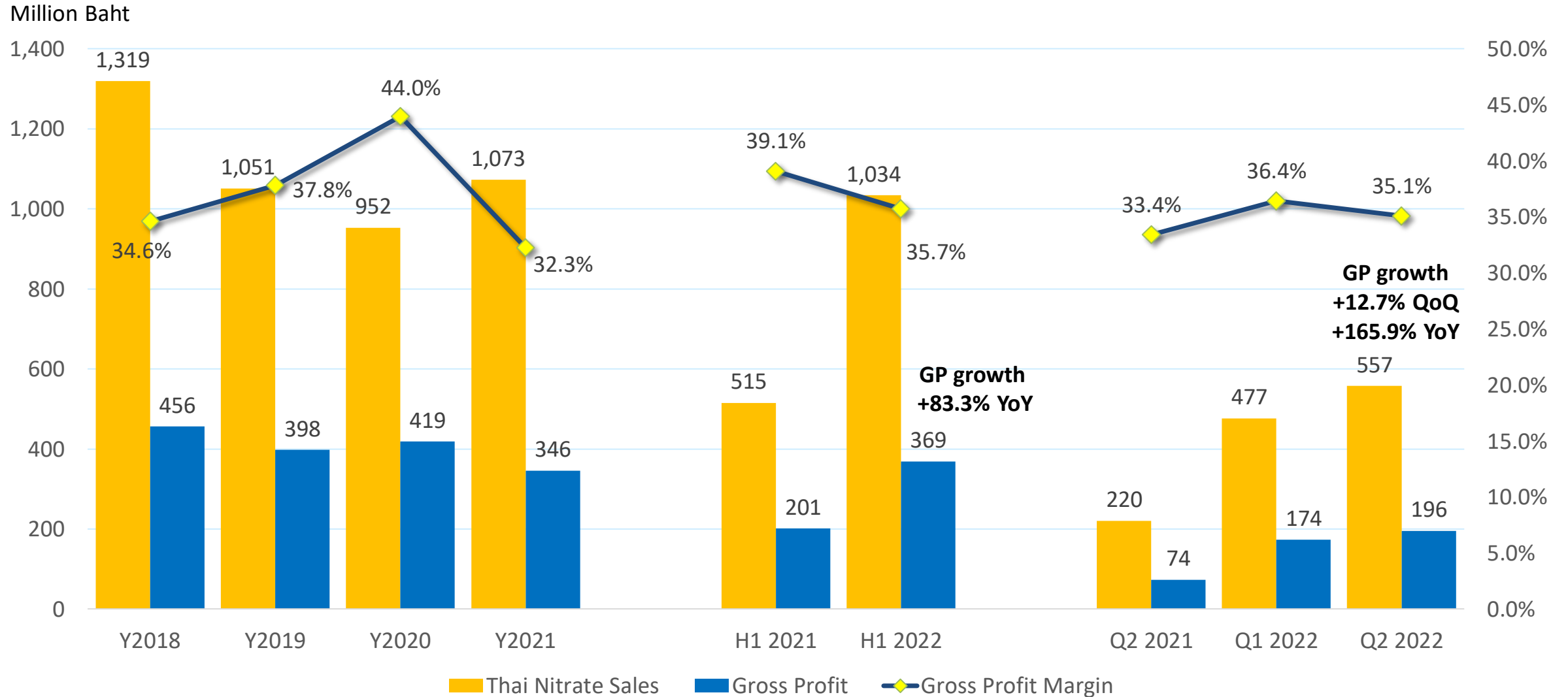
Million Baht







# Nitrate - Sales Revenue & Gross Profit Margin





# Segment's most influencing factor

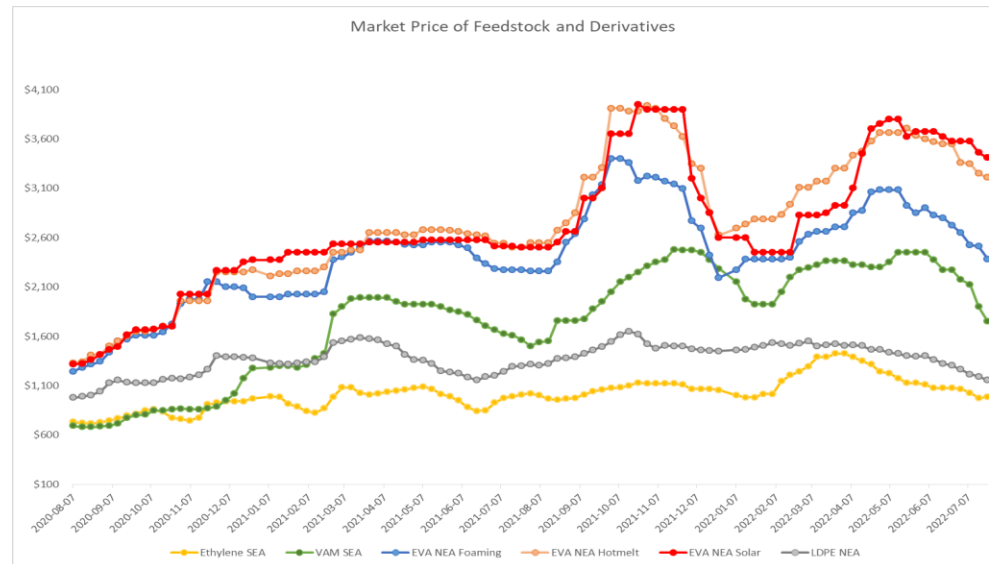
## HVA positioning of EVA– Hotmelt and Solar insulates revenues and margins

Comparative spread of various EVA grades\*

USD/ton	EVA Foam	EVA Hotmelt	EVA Solar	Spread Differential over EVA Foam	
				Hotmelt	Solar
1Q21	1,134	1,223	1,342	8%	18%
2Q21	1,358	1,407	1,321	4%	-3%
3Q21	1,375	1,562	1,467	14%	7%
4Q21	1,770	2,232	2,179	26%	23%
1Q22	1,134	1,505	1,195	33%	5%
2Q22	1,490	2,038	2,037	37%	37%

Product Portfolio 1H22

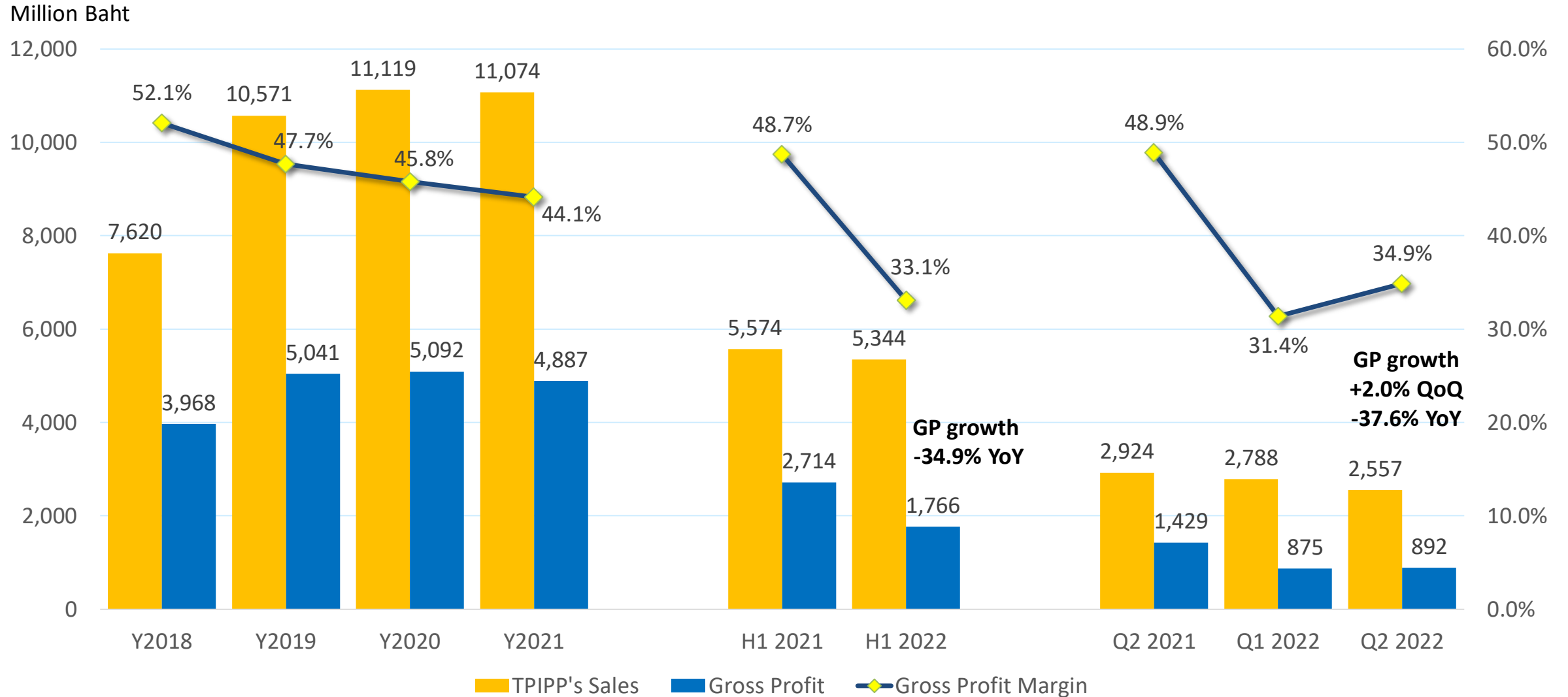
EVA Foam	21%
EVA Hotmelt	67%
EVA Solar	12%
	100%



• Spot prices are based on ICIS CFR NE Asia Source: ICIS



# Energy/Utilities - Sales Revenue & Gross Profit Margin





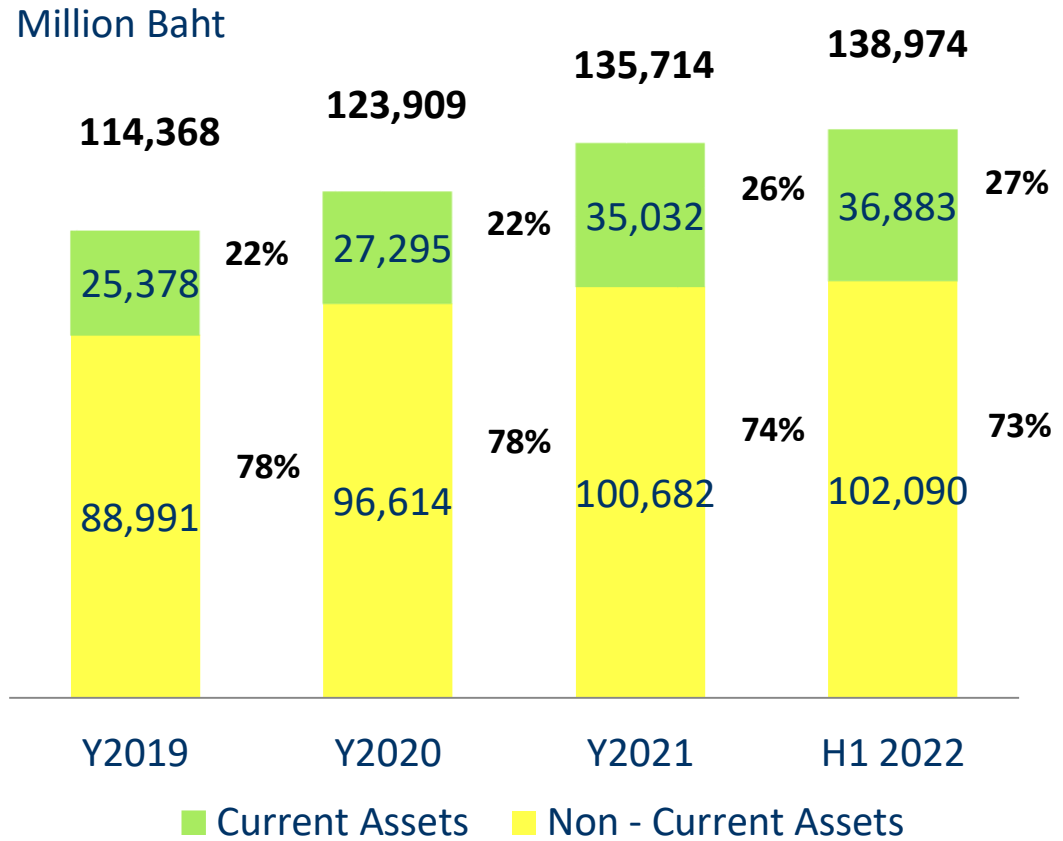
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# Section 3: Capital Structure

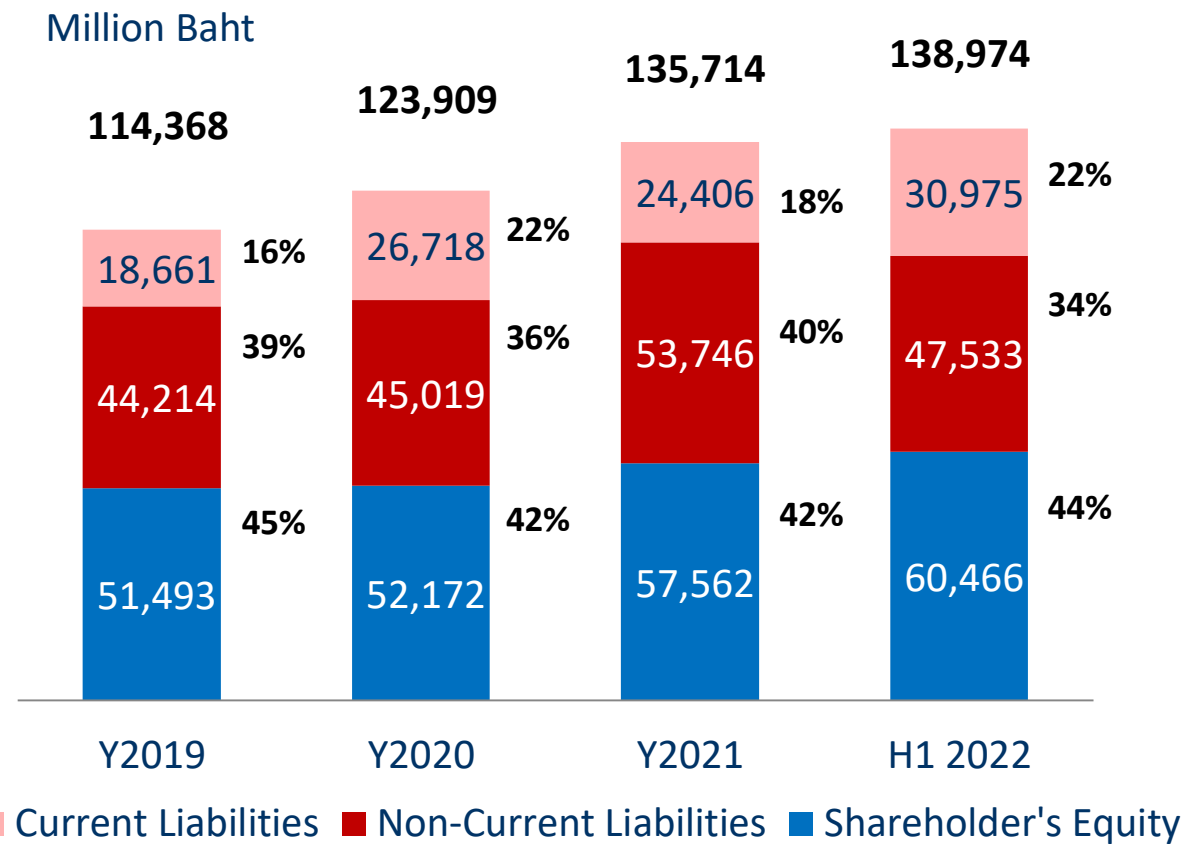


# Financial Structure

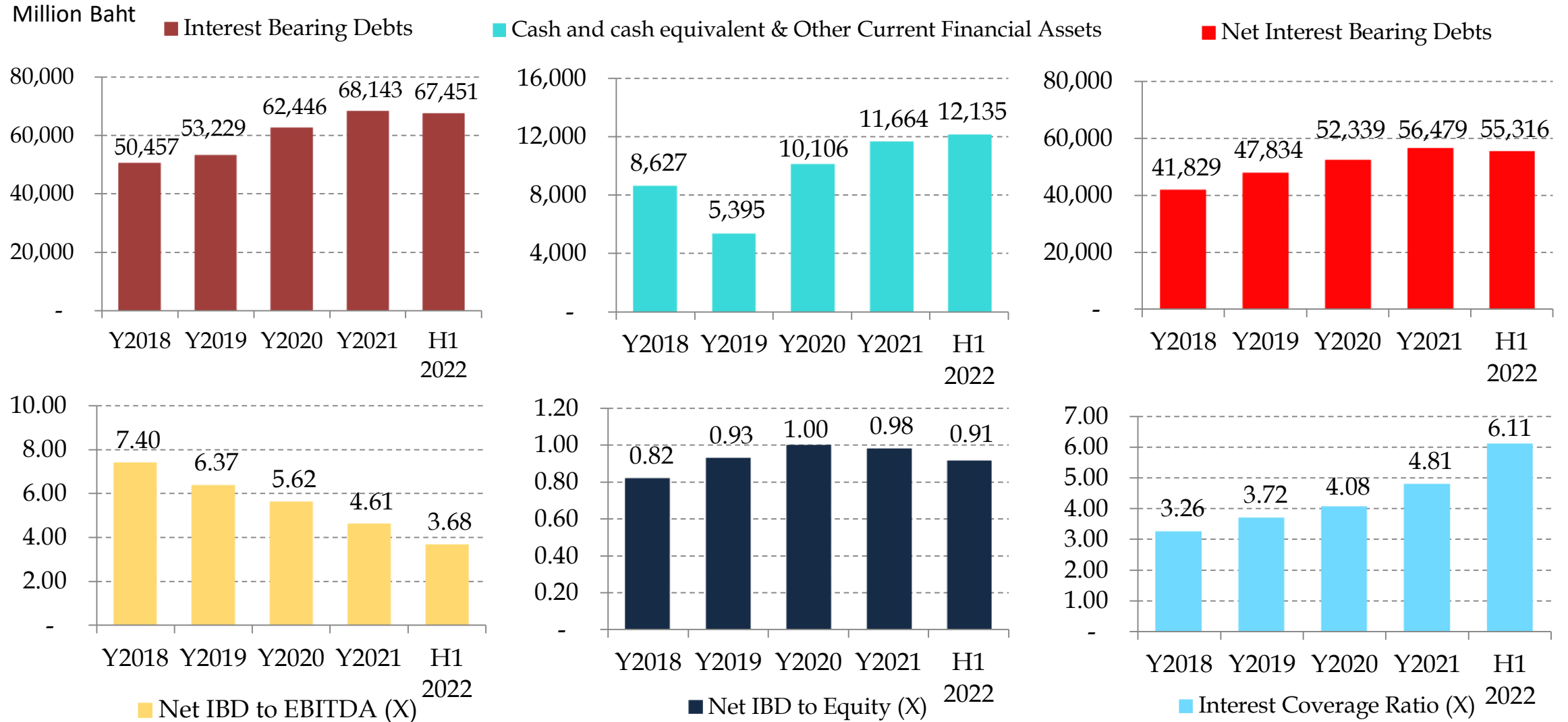
## Assets



## Financial Structure



# Debt Profile and Leverage Ratios





## Total Assets, Liabilities & Equity - June 30, 2022

Current Assets	36,883.32 MB
Non – Current Assets	102,090.35 MB
<b>Total Assets</b>	<b>138,973.68 MB</b>
Interest Bearing Debt - Current	22,600.49 MB
Interest Bearing Debt - Long – Term	44,850.25 MB
<b>Total Interest Bearing Debt</b>	<b>67,450.74 MB</b>
Non - Interest Bearing Debt - Current	8,374.75 MB
Non - Interest Bearing Debt - Long – Term	2,682.45 MB
<b>Total Non - Interest Bearing Debt</b>	<b>11,057.20 MB</b>
<b>Total Liabilities</b>	<b>78,507.94 MB</b>
Equity attributable to owners of the parent	51,090.95 MB
Non-controlling interest	9,374.79 MB
<b>Total Equity</b>	<b>60,465.73 MB</b>
<b>Total Liabilities and Equity</b>	<b>138,973.68 MB</b>





# Company Credit Rating

TPIPL	Company Rating	• BBB+
	Issue Rating	• BBB+
	Outlook	• Stable

Reported by TRIS on 19 April 2022

TPIPP	Company Rating	• BBB+
	Issue Rating	• BBB+
	Outlook	• Stable
	TPIPP Stand-alone credit Rating	• a

Reported by TRIS on 8 July 2022



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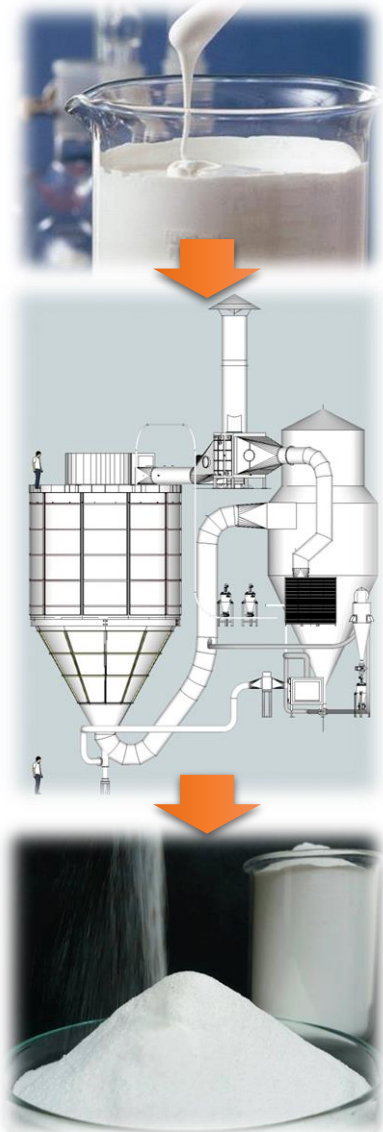
# Section 4: Project Pipeline



# Plant Operation Improvements and Future Projects

- **Cement Business**
  - Improve kiln to use MSW fuel 25-30 % completed by Q4/2022 → cost saving by Baht 1,300 - 1,500 Million p.a.
  - Install system for Aggregate and CDE plants, COD by Q1/2023 → cost saving by Baht 120 Million p.a.
  - Electric dump trucks for quarry , fully effective by Q4/2022 → cost saving by Baht 180-200 Million p.a.
  - Expand mortar plant capacity by 660,000 ton p.a. COD by Q4/2023
- **Power Plant**
  - **In year 2022**
    - Upward Trend of FT Adjustment in year 2022 → increase EBITDA by Baht 1,068 million in year 2022.
    - Increase RDF usage in TG7&TG8 in year 2022 → cost saving by Baht 168 million in year 2022.
    - Additional EBITDA from RDF sold to TPIPL → increase EBITDA by Baht 36 million p.a. in year 2022 onwards.
    - Decrease administrative expense.
  - **In year 2023 onwards**
    - Increase RDF usage in TG7 (COD Apr 2023) → cost saving by Baht 500 million p.a., and TG8 (COD 2025) → cost saving by Baht 1,500-2,500 million p.a., totaling Baht 2,000-3,000 million p.a.
    - RDF plant expansion (COD 2023) will reduce RDF cost by Baht 150/ton → cost saving by Baht 120 million p.a.
    - RDF Power Plant in Songkla and Nakornratchasima , COD in 2024 → increase EBITDA by Baht 600 million p.a.
    - Other potential bidding projects according to the Energy Regulator Commission (ERC) announcement.
    - Solar Power Plant target 800 MW Capacity in 2023-2030.
- **LDPE/EVA**
  - Increase new EVA powder capacity by Q4/2022 → increase EBITDA by Baht 40 - 60 million p.a
  - New value added products by Q3/2022 → increase EBITDA by Baht 15-20 million p.a.
  - Increase HVA EVA capacity by 10% - 2023

# Commercialize a new EVA Powder Plant by Q4/22



**Increase EVA powder  
installed capacity  
6,000 tpa.**

Making the total capacity jump 4x

TPI is one of two world leading producers that  
has all EVA types.

**S**ynergy of having **EVA Resin**,  
**EVA Emulsion**, and **Powder**

- Share infrastructure, raw materials
- Utilized waste steam and waste Ethylene purge gas from EVA high pressure process
- Reduce raw material and processing cost
- Improve environment

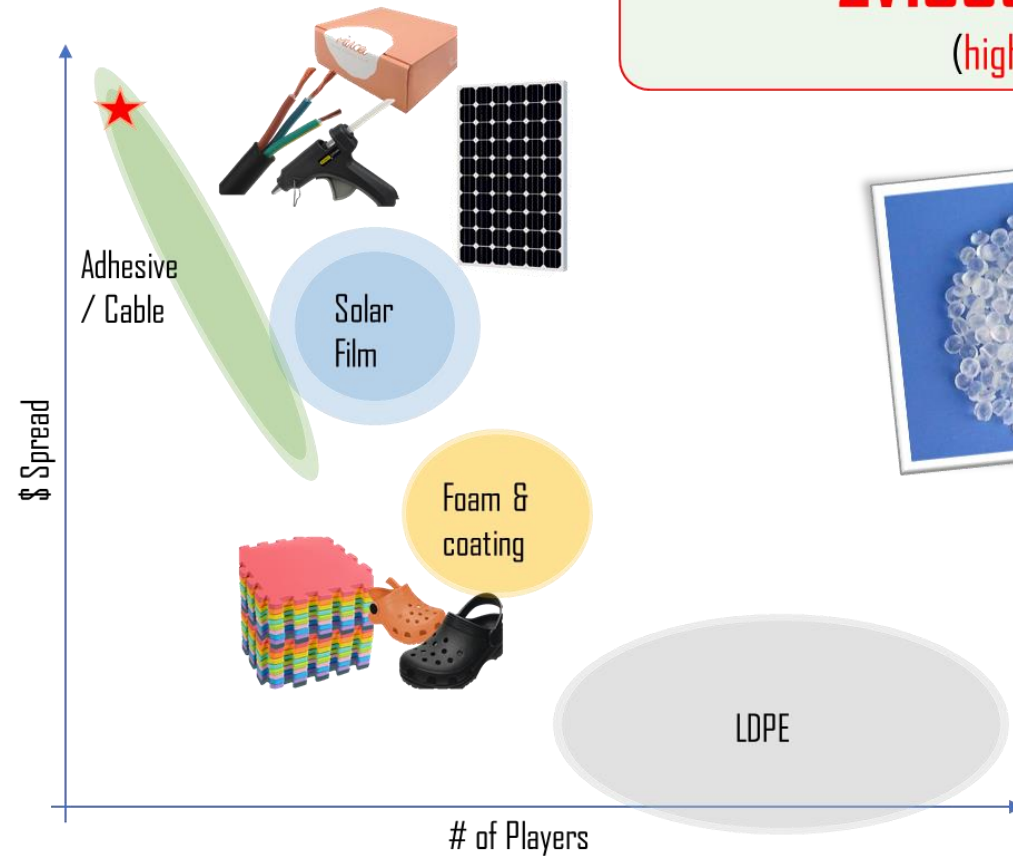
Applications: construction material additive,  
adhesive mortar, skim coat, wall putty



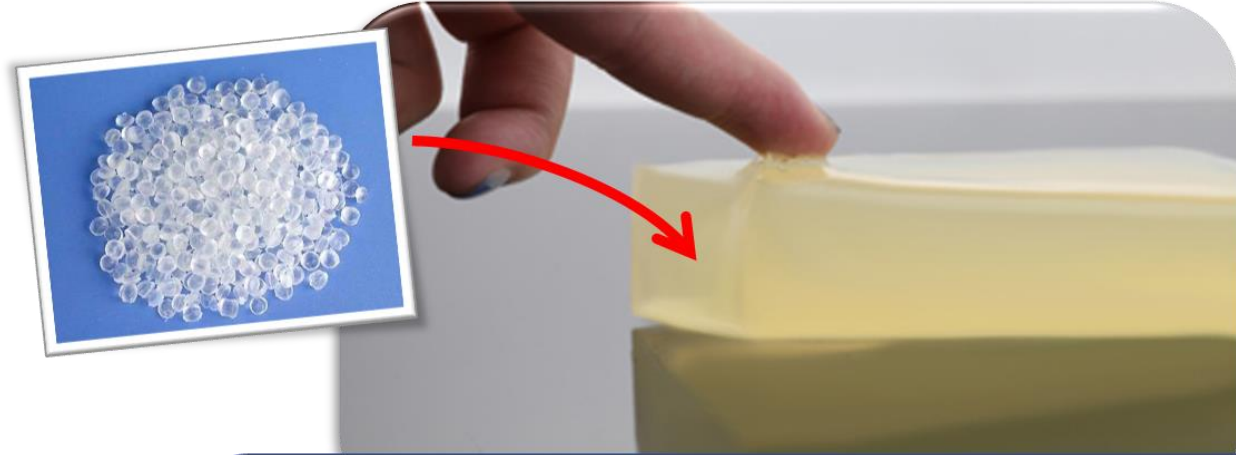
**EVA Powder spread is 5x EVA emulsion,**  
and **less price volatile** than EVA resin

**Potential EBITDA increase of 40-60 million  
Baht** on annualized basis at current margins  
will be realized in 2023.

# Commercialize a new value added EVA in Q3/22

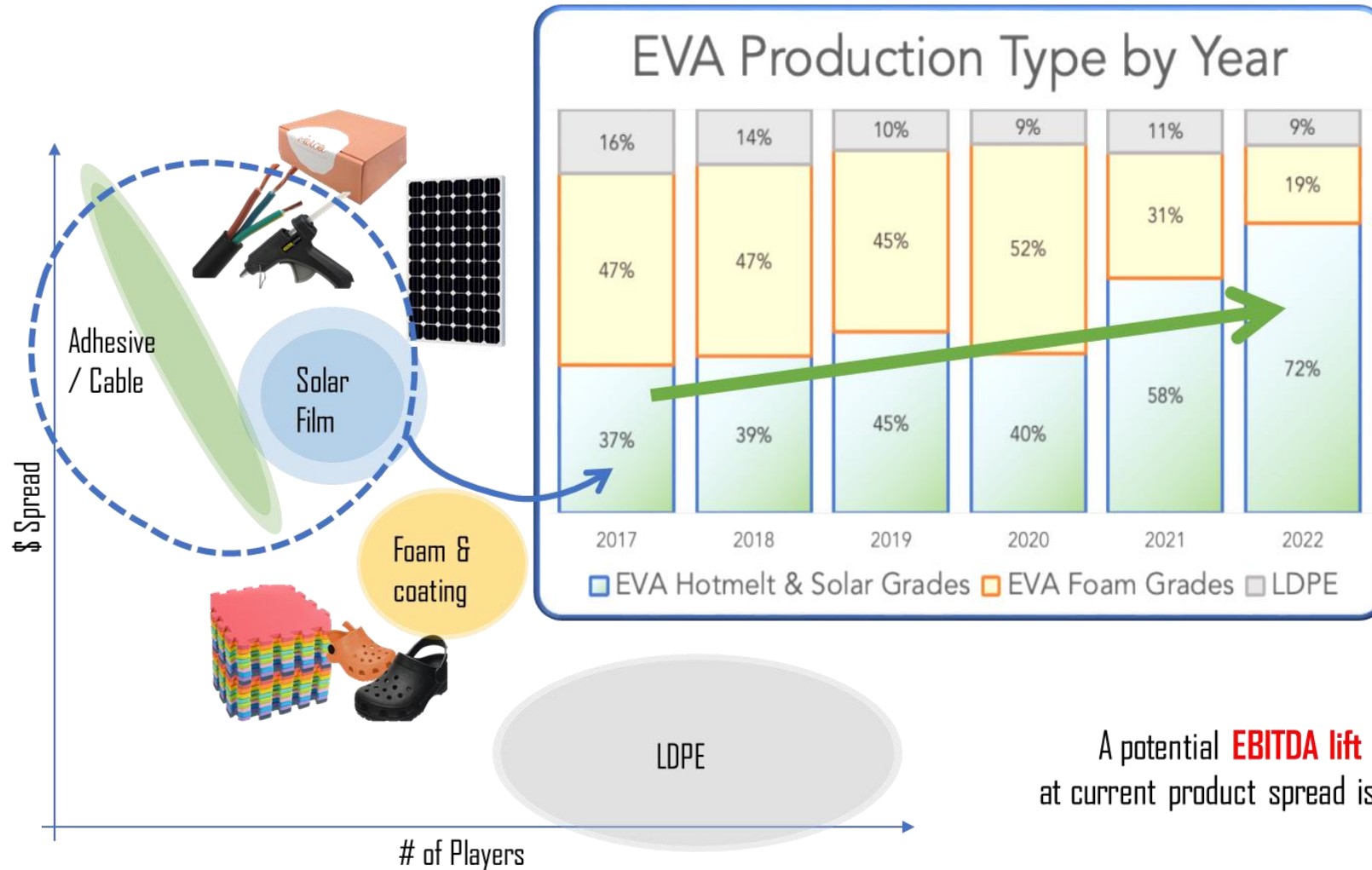


**ZV1055** – 28% VA content; MFI 800 g/min  
 (highest flowability in the market)



- Roughly 10% premium over top hotmelt adhesive grade; **a potential EBITDA increment of 15-20 million baht** annually at current prices.
- Few producers and low threat from new Chinese capacities; thus, **more sustainable profit.**

# Increase HVA EVA Production Rate by 2023



Although, HVA EVA grades has better price premium over foaming grades, most plants suffer rate reduction trade-off.

**TPI** has successfully recovered those penalties and will further improve to surpass the original capacity. We expect total **capacity of HVA EVA products will increase around 10%.**

A potential **EBITDA lift of 200-300 million Baht** on annualized basis at current product spread is expected **in 2023.**








\*Data in 2022 is from Jan - July 2022.

# Section 5: Our ESG Drive



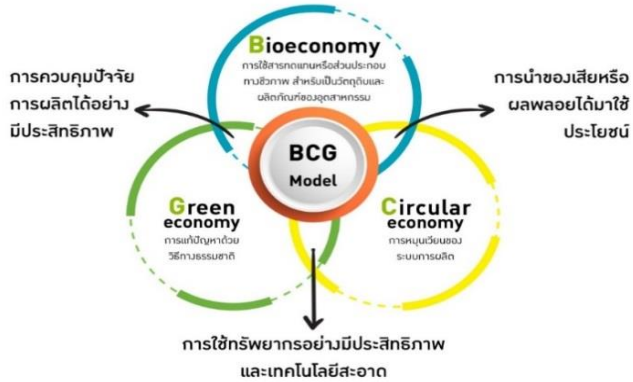
# Environmental, Social and Governance Scorecard



 <b>Economic Dimension</b>	 <b>Environmental Dimension</b>	 <b>Community and Social Dimension</b>	 <b>Corporate Governance Dimension</b>
Total Revenue Baht 41,279 million	Certified Carbon Credit T-VERs by TGO - Jul 2015 - Apr 2017 = 82,056 tCO <sub>2</sub> eq Sold 34,690 tCO <sub>2</sub> eq Net 47,366 tCO <sub>2</sub> eq - 1 May 2017 - 31 Dec 2020 = 717,931 tCO <sub>2</sub> eq Balance 765,297 tCO <sub>2</sub> eq	Donated community and social assistance Baht 153.51 million	TPIPL ranking in top ESG emerging securities list in 2022  
Employees Wages and benefits Baht 6,346 million	Carbon reduction from landfill by 5.08 million tons of CO <sub>2</sub> equivalent under registration with TGO	Injury Frequency Rate (IFR) of employees and contractors 0.169 <sup>(1)</sup> and 0.276 <sup>(1)</sup>	TPIPP, one of the 100 top companies in ESG 100 in 2022  
Tax expense Baht 177.90 million	used all types of waste of 2.19 million tons, as a substitute for coal.	No loss time injury (hrs) 3,705,787 hrs <sup>(1)</sup> (increase of 21.90% over 2020)	TPIPP receives ESG credit <b>ESG Credit</b> The Sustainability Currency
Net Profit Baht 6,918 million	Waste fuel is used instead of coal at cement plant 105,997 tons <sup>(1)</sup> (The machines have not yet run full year operation.)	Death and injury rates from work of employees and contractors 0	Awarded CG score  from The Thai Institute of Directors Association (IOD)
Dividend per share Baht 0.09 (Cash Dividend)	Proportion of reused water 50% <sup>(1)</sup>	Average training hours to employees 22.62 hrs/person/year <sup>(1)</sup>	Proportion of Independent Directors 35.71% <sup>(1)</sup>
	Waste management with 3 R of total waste quantity 99.92% <sup>(1)</sup>	Customer satisfaction/ Satisfaction in solving problems to customers 86.40% <sup>(1)</sup> and 95.40% <sup>(1)</sup>	Proportion of Female Directors 21.43% <sup>(1)</sup>
	Project value to reduce Environmental Impacts Baht 2,210 million <sup>(1)</sup>		No complaints of Discrimination <sup>(1)</sup>

Remark: (1) Only for TPI Polene Public Company Limited

# ESG Awards



**ESG Emerging** 2022  
Environmental • Social • Governance

**ESG100** 2022  
Environmental • Social • Governance

## ESG Credit

The Sustainability Currency





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## **Section 6: Other Matters**

# Litigation Cases

Case	Case Date	Plaintiff	Charge/Offense	The Court ordered the Company by Environmental Acts B.E. 2535 to either		status
				Pay Value (Mil.Baht)	Or Fill Industrial Mineral Rock (Mil.Ton)	
Sor Vor 4/2559	8/7/2015	Department of Primary Industry and Mines, Ministry of Industry (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)	4,047	31.52	Pending the Supreme Court Consideration
Sor Vor 5/2559	24/3/2016			1,603	12.48	Pending the Supreme Court Consideration
Sor Vor 6/2559	24/3/2016			314	2.45	Pending the Supreme Court Consideration
Sor Vor 1/2560	2/3/2017			326	1.22	Pending the Supreme Court Consideration
Sor Vor 2/2561	21/6/2018			67	0.25	Pending the Supreme Court Consideration
<b>Total</b>				<b>6,357</b>	<b>47.92</b>	

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.
- The Company has approx. 600 million tons of industrial mineral rock in the concession area, and by the end of such concession period, the Company will still have approx. 400 million tons of industrial mineral rock left and forfeited. Therefore, the Company has no reason to commit any illegal act as accused. At the moment, the concession for all these areas have been renewed including the disputed buffer zones.

From December 2021 until Q2 2022, the Company has been granted limestone and shale concession for the manufacturing of cement industry from the Department of Primary Industries and Mines, with long-term concession period of 27 years for limestone and shale reserves total 415.58 million tons.

# Litigation Cases (cont'd)



Case Date	Plaintiff	Charge/ Offense	Court ordered	status
			Value (Mil. Baht)	
2/6/2017	Tham Phra Phothisat Temple	The court called the Company to be an interpleader for the claim that the Defendants' issuance of Prathanabat to the Company is done in contradiction to regulation of Ministry of Interior	Depend on the value of rock used	The Central Administrative Court dismissed the lawsuit  Pending in the Supreme Administrative Court
20/6/2019	Tham Phra Phothisat Temple	The application for Prathanabat of the Company is unlawful	unspecified	Pending in the Central Administrative Court
16/12/2019	222 individuals	Sue requesting for revocation of the approval of EHIA report for the 150 MW power plant, the license to operate the business and the construction approval of the subsidiary.	-	Pending in the Central Administrative Court

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# Q&A

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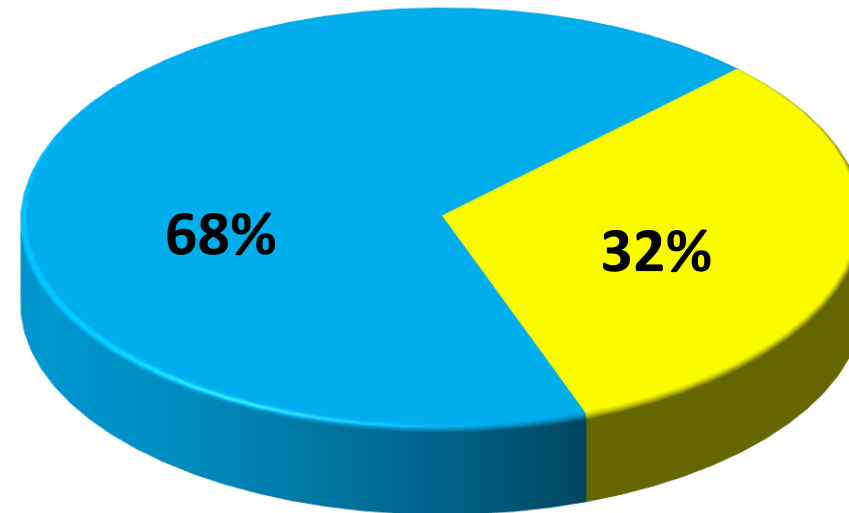
# Supplementary Information



# Shareholders – March 10, 2022

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## Shareholding Structure



■ Leophairatana Family

■ Others

**Note : On July 27,2022, the Company has registered to decrease registered and paid-up registered capital from the formerly Baht 19,126.50 million to Baht 18,935.235 million (par value of Baht 1 per share), by writing off the company’s 191,265,000 unsold repurchase shares.**





# Business Profile

	Products
<b>Cement &amp; Construction Materials</b>	Products under “TPIPL” trademark
	<ul style="list-style-type: none"><li>▪ Clinker and Cement</li><li>▪ Mortar</li><li>▪ Ready-Mixed Concrete</li><li>▪ Paints</li><li>▪ Concrete Roof Tiles</li><li>▪ Fiber Cement Board</li><li>▪ Light Weight Concrete</li></ul>
<b>Petrochemical &amp; Chemicals</b>	Products under “POLENE” trademark
	<ul style="list-style-type: none"><li>▪ LDPE Homopolymer (LDPE) and LDPE Copolymer (EVA)</li><li>▪ EVA Emulsion &amp; EVA Powder</li></ul>
	Products by TPI All Seasons
	<ul style="list-style-type: none"><li>▪ Polene Solar<sup>®</sup> and Vista Solar<sup>®</sup></li></ul>
	Products by Thai Nitrate
<ul style="list-style-type: none"><li>▪ Nitric Acid (24,500 TPA)</li><li>▪ Ammonium Nitrate (95,000 TPA)</li></ul>	



# Business Profile (cont'd)

	Products
<b>Power Plant Energy &amp; Utilities</b>	<p>Products by TPIPP</p> <ul style="list-style-type: none"><li>▪ Waste Heat Recovery Power Plant - 40MW</li><li>▪ RDF Power Plant - 180MW</li><li>▪ Coal/RDF Power Plant - 220MW</li><li>▪ RDF Plants -Receive 14,400 TPD of MSW equivalent to produce up to 5,500-7,000 TPD of RDF</li><li>▪ MSW disposal and RDF power plant project, Songkhla - 12MW - COD 2024</li><li>▪ MSW disposal and RDF power plant project, Nakhon Ratchasima - 12MW - COD 2024</li><li>▪ Operate 8 petrol stations, 1 gas station and combined 3 petrol &amp; gas stations</li></ul>
<b>Agriculture</b>	<p>Products by TPIPL Group</p> <ul style="list-style-type: none"><li>▪ Organic Fertilizer and Organic Matter for Plants</li><li>▪ Probiotic Product for Animal Farming and Fishery</li></ul>
<b>Healthcare Product</b>	<ul style="list-style-type: none"><li>▪ Printemp Marie Rose Shampoo</li><li>▪ EESY Clean</li><li>▪ Bio San</li><li>▪ Bio Knox</li></ul>



# Business Profile (cont'd)

Products	
<b>Others</b>	<ul style="list-style-type: none"><li>▪ Industrial Waste Disposal Business to dispose hazardous industrial waste from nearby industries</li><li>▪ Drinking Water Business (obtain a certificate approved from the Food and Drug Administration-FDA)</li><li>▪ Packaging Business (operated by United Grain Industry Co., Ltd.)</li></ul>
	<ul style="list-style-type: none"><li>▪ This project helps eliminate hazardous industrial waste from industries, enhance recycling opportunities, lower raw material and fossil fuel usage, and develop a recycling economy with considerable economic benefits.</li></ul>

# Cement & Construction Materials

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## Cement

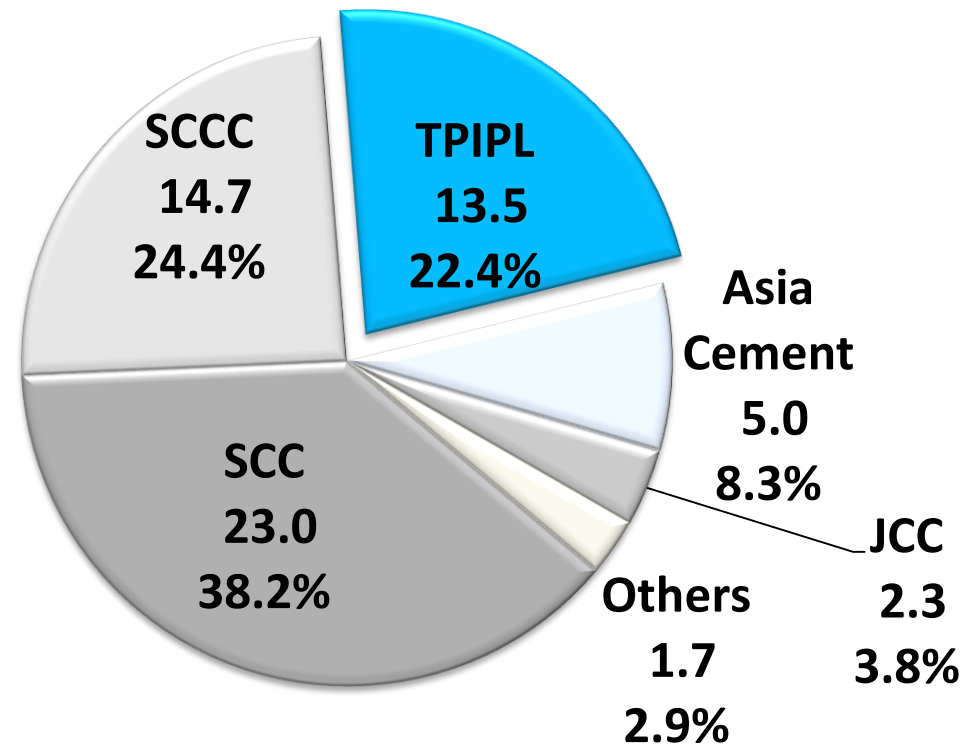
- Operates 4 most up-to-date cement production plants – total capacity 13.5 MT p.a., with low-cost competitive advantage.
- The third largest cement manufacturer and distributor in Thailand, next to limestone quarry.
- The third largest concrete plants in Thailand.
- The largest mortar manufacturer in Thailand.
- Efficient transportation distribution network.
- The first cement manufacturer uses RDF as fuel.

# Cement & Construction Materials

## Thailand Major Cement Producers

**Cement Capacity 60.2 Million Ton**

Unit : Million Ton



Source : Company Estimated



# Cement & Construction Materials

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## **Ready-mixed Concrete – operated by TPIC (99.99% subsidiary)**

- The third largest manufacturer and distributor of ready mixed concrete.
- Capacity 3.88 million cubic meter p.a.
- Market share of approximately 11%

## **Dry Mortar**

- 4 Dry Mortar Plants - capacity 3.0 MT p.a.

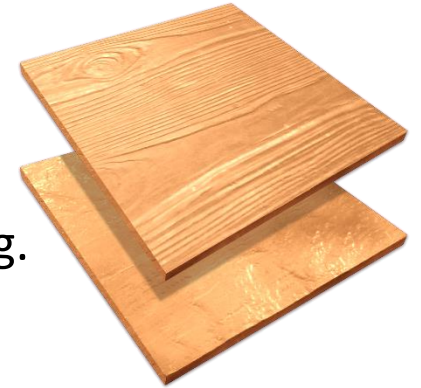
## **Light Weight Concrete**

- Capacity 300,000 cubic meter p.a.

# Cement & Construction Materials

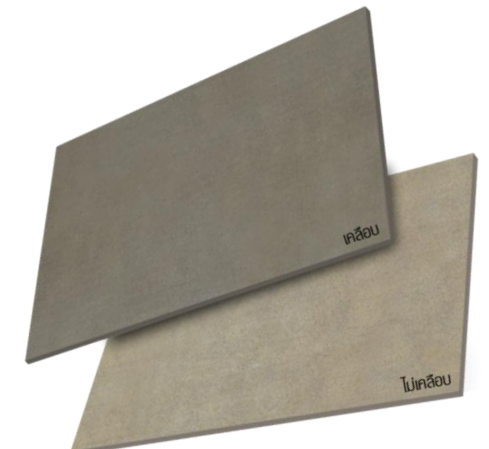
## Concrete Roof Tile

- Capacity of 4 million square meters or 45 million pieces p.a.
- Granted BOI promotional privilege.
- Design for structure of concrete roof tiles, i.e. roofing system, heat-resistant coating.



## Fibre Cement

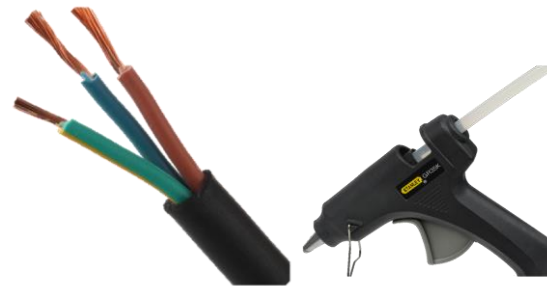
- 4 fibre cement plants - capacity 380,000 Tons p.a.
- Comprised of board sheets, substitute for wood product category, digital Board and wall & floor decoration, conforming to European/ Australian/ Thai Standards/ American Standards.
- Asbestos-free and environmentally friendly.
- Granted BOI promotional privilege.



# Petrochemical & Chemicals

## ■ LDPE & EVA Resin

- Capacity 158,000 tons p.a.
- A sole EVA producer in Thailand and one of a few producers with proprietary EVA technology for all grades of EVA.
- LDPE is used in film and food packaging, lamination and injection for household uses and medical applications.
- EVA is used in foaming, coating, wire & cable, labeling, shoes soles, hotmelt, solar film application and safety glasses.





# Petrochemical & Chemicals

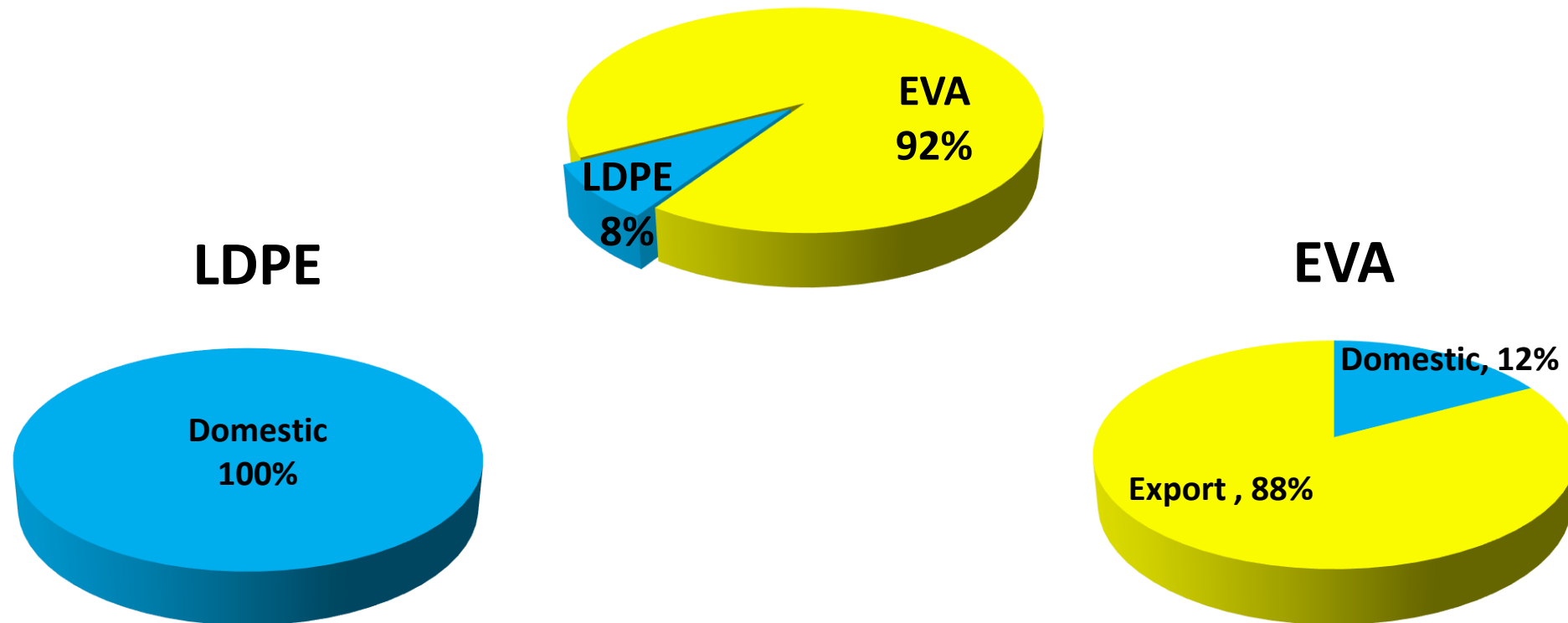
## ▪ EVA Emulsion and Powder

- EVA Emulsion and Powder - capacity 24,000 tons p.a.
- Granted BOI promotional privilege.
  
- EVA Emulsion is used as adhesive material in label & packaging, furniture, and book binding.
- EVA Powder is used in special adhesive concrete, mortar, and construction applications.



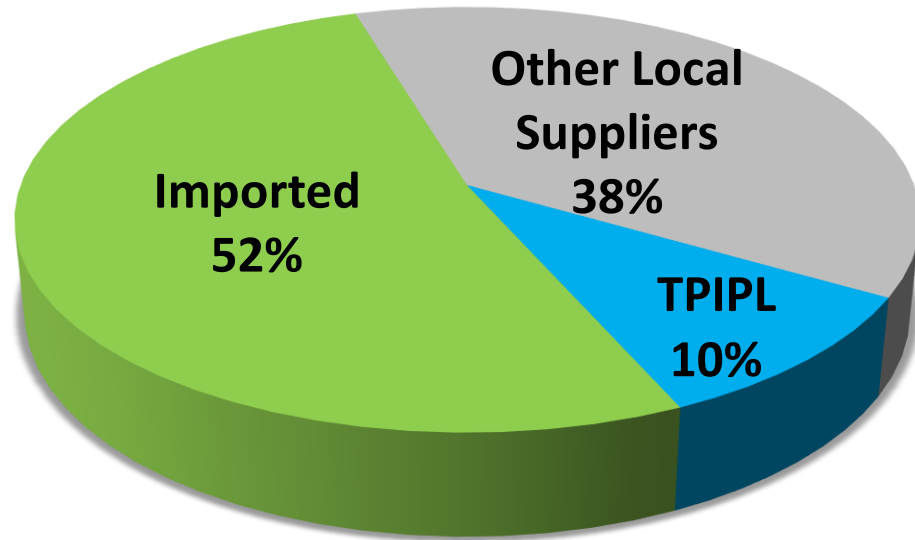
# Petrochemical & Chemicals in H1 Yr. 2022

## TPIPL's LDPE VS EVA Sales Volume

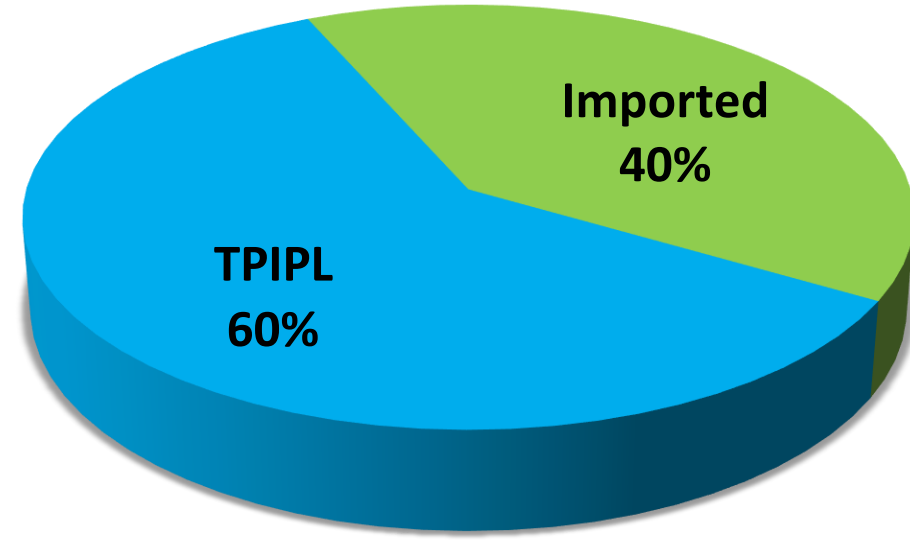


# Petrochemical & Chemicals in H1 Yr. 2022

## LDPE MARKET SHARE



## EVA MARKET SHARE





# Petrochemical & Chemicals

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## **Polene Solar<sup>®</sup>, Vistasolar<sup>®</sup> - operated by TPI All Seasons (99.99%-subsidiary)**

- EVA sheet for (i) photovoltaic modules, (ii) laminated safety glass, (iii) multi-purpose sheet used as PVC sheet substitutes.
  - EVA sheets are sold under tradenames: Polene Solar<sup>®</sup> and Vistasolar<sup>®</sup>
  - Operates 10 production lines - capacity 20,100 Ton p.a.

## **Ammonium Nitrate & Nitric Acid – operated by Thai Nitrate (99.99% subsidiary)**

- The largest manufacturer and distributor of Ammonium Nitrate and Nitric Acid in the country
- Capacity 95,000 tons p.a. and 16,000 tons p.a., respectively.



# Energy & Utilities

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## **Power Plants – operated by subsidiary TPIPP**

- The Largest Waste-To-Energy Power Plant Operator in Thailand
- Clean and Green Power Plant Producer
- Classified as the largest community waste disposal plant in the world, using MSW to produce electricity, located in the single area.
- A pioneer with expertise to effectively meet the challenges of the waste power industry
- Storage warehouse for storing up to 100,000 tons of RDF

# Energy and Utilities

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- 2 Waste Heat Recovery Power Plants (TG1&2) - each 20 MW, totaling 40 MW
  - Uses waste heat purchased from TPIPL to produce electricity.
  - Electricity sold at the base tariff to TPIPL.
  - BOI promotional privileges expired.
  
- 20-MW RDF Power Plant
  - Uses RDF to produce electricity.
  - Electricity sold to EGAT under 18 MW PPA, at the base tariff (adder expired in January 2022).
  - BOI promotional privileges expired.
  
- 60-MW RDF Power Plant
  - Use RDF to produce electricity.
  - Electricity sold to EGAT under 55 MW PPA, with adder of Baht 3.50 per unit on top of the base tariff for 7 years, since August 2015.
  - Granted promotional privileges from the BOI.

# Power Plant & Energy

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- 70-MW RDF Power Plant combined with 30-MW WHRPP - totaling 100 MW
  - Use RDF in TG6 and waste heat in TG4 to produce electricity.
  - Electricity sold to EGAT under 90 MW PPA, with adder of Baht 3.50 per unit on top of the base tariff for 7 years, since April 5, 2018.
  - Granted promotional privilege from the BOI.
- 70-MW Coal/RDF Power Plant – approved license for power generation capacity of 40 MW
  - Electricity sold at the base tariff to TPIPL.
  - Phase 1 : modification to use 100% RDF under 40 MW , COD in October 2022.
  - Phase 2 : expand power generation capacity from 40 MW to 70 MW , COD in May 2023.
- 150-MW Mixed Fuel-fired Power Plant
  - Electricity sold at the base tariff to TPIPL.
  - Granted promotional privilege from the BOI.
  - Phase 1 : modification to use 20% RDF , COD in September 2022.
  - Phase 2 : modification to use 100% RDF , COD in June 2024 , October 2024 , February 2025 respectively

# Other Businesses

## Bio-Tech – operated by TPI Bio Organics, TPI Bio Pharmaceuticals, TPI Healthcare – 99.9% subsidiaries

- Organic Fertilizer
  - Granted promotion privilege from the BOI
  - Obtained quality products in compliance with the standards of IFOAM for liquid fertilizer on September 5, 2011.
  - Using natural substances and environmentally friendly, by company's research and development team
- Pesticide, probiotics for livestock.
- Hygiene and healthcare products.
  - Health beverages for consumers, including beverages to prevent disinfection of both viruses and bacteria, and offering chemical-free hygiene products as follows :
    1. Bio Knox Powder : A high quality natural calcium and vitamin C supplement, effective in the destruction of bacteria and viruses.
    2. Micromknox Solution and Micromknox Powder : For spraying in residential areas to reduce the amount of bacteria and viruses.
    3. Printemp Marie Rose Mouthwash, Ginger & Mint favors.
  - Research from Mahidol University (Siriraj Hospital) and and the Academic Service Center, Chulalongkorn University, certified that products such as Bio Knox and Mouthwash can combat the virus.







## Other Businesses

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### **Drinking Water Business – under the brand name “TPIPL”**

- Good quality and safe, reverse osmosis technology (RO), ultra violet treatment and the ozone treatment process.
- Obtain a certificate approved from the Food and Drug Administration (FDA).

### **Industrial Waste Disposal Business**

- Operate industrial waste disposal business to dispose hazardous industrial waste from nearby industries.
- Eliminate hazardous industrial waste, enhance recycling opportunities, lower raw material and fossil fuel usage, and develop a recycling economy.

### **Investment in companies, i.e.**

- 25% in TPI Life insurance – Life insurance
- 19% in United Grain Industry Co., Ltd. - Packaging business
- 99.99% in Thai Propoxide Co., Ltd. and 83.27% in Mondo Thai Co., Ltd. – land bank assets
- Others

# Healthcare Products



**PRO150**  
เครื่องดื่มบำรุงกำลัง  
และ **PROVITA**  
เครื่องดื่มเพื่อสุขภาพ



**BIO KNOX**  
ผลิตภัณฑ์เสริมอาหาร  
แคลเซียม&วิตามินซี



น้ำยาบ้วนปาก



**ALCOHOL  
HAND GEL**



**ALCOHOL  
HAND  
SPRAY**

# Healthcare Products



สบู่เหลวล้างมือและสบู่เหลวอาบน้ำ

**Blossom Collection**



สบู่เหลวล้างมือ  
**Gold Collection**



**TPI Green Alkaline Wash**  
น้ำยาล้างผัก&ผลไม้



**EESY CLEAN**  
น้ำยาล้างจาน และ  
น้ำยาขจัดคราบไขมัน

**Micromknox Solution**

สำหรับฉีดพ่นบริเวณที่พักอาศัย  
เพื่อฆ่าเชื้อแบคทีเรียและไวรัส





# Organic Fertilizer



# Probiotics for livestock





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**End of the presentation material**