

SET **AA**
ESG Ratings 2024



TPI Polene Public Company Limited
SET Opportunity Day
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Topics

Group background
Review on 1Q 2025
Initiatives
Operating performance
Segment highlights
Sustainability strides

Key Assets Featuring ESG Ventures for Sustainability



Construction Materials

- **Green Cement** - 4 lines totaling 10.8m tons clinker capacity (13.5m tons cement basis)
 - Largest single location Cement plant with high **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** – 30,000 tons per year, 10m liters of pyrolysis oil /year, current production 14,000 tpy
- **Adhesives-Paints**
- **Other Promising ventures**
 - **All Solid & Liquid waste disposal** including hazardous materials
 - **Life and Non-life Insurance**

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

Waste to Power Plants

- **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**
- **MSW Power projects in two provinces** (under implementation)
- **Coal to MSW Power Plant – 150 MW**
 - Target 100% MSW by 2025; 1 boiler COD 8/24; Phase 1 will be online Jan-25
 - **MSW power plant**

Power from Green Energy

- **Solar Farm – 89 MWac**, 69MWac online, all complete by June 2025. PPA signed
- **Solar Roof capacity - 5 MWac**
- **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/gas stations. Four stations have EV chargers



Initiatives

Green Cement & Green Building Products

Innovative Specialty Polymers

Bio-organic Products for Food Safety & Food Security

Green Energy & Power Capacity

Cost efficiency via plant retrofitting

Initiatives: Green Energy (power capacity)

Solar farms in Saraburi – c.700 rai, 69MWac



Long term PPA with TPIPL

- * raising electricity self-sufficiency
- * raising the ratio of **Green Energy** in cement production

Solar roofs at plants



Initiatives: Green Energy (Solar Roofs & Waste to Energy)

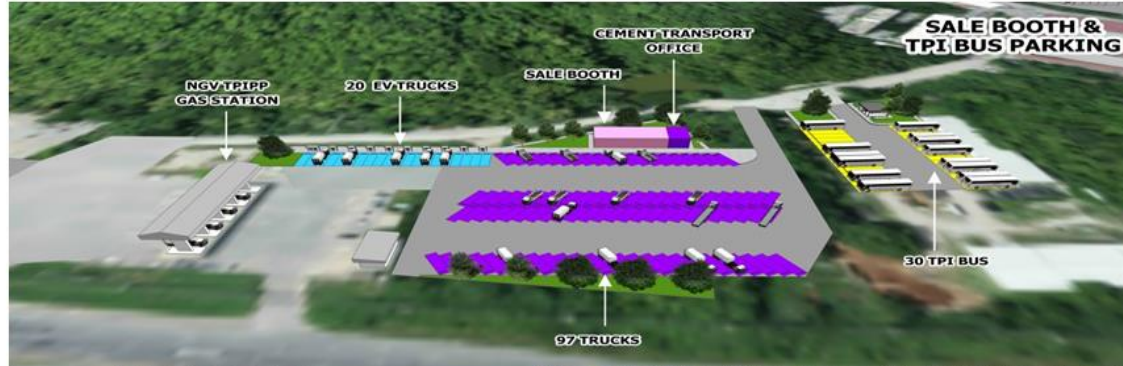
The solar roofs in DCs Lower day-time off take from the grid



MSW as AFR in the calciner – up to 25% coal replace-ability (installed basis)



Initiatives – Cost Efficiency/Cost Savings




Has begun converting the 12 petrol stations into a hybrid petrol + EV stations
 Has begun converting delivery trucks and executives' cars to EV or hybrid




60 Tons Electric Dump Trucks
 41 Trucks needed to transport raw materials from mining sites



15 pick-ups and 25 Forklifts used in distribution of products



Transform all mining equipment that use fossil fuels, such as driller, loader and Backhoe, totaling 100 vehicle into electric vehicle . The group saves Diesel oil by 15,000,000 liters and saves NGV by 657,000 kg, reducing the carbon emission by 42,395 tons of CO₂/year

Overall, consumption of diesel has dropped significantly



Operating Performance

Most kilns came back online from maintenance

RDF/Coal ratio improved

Clinker exports resumed late Feb, volume normalizing

TG8 conversion to MSW is 60% complete

69 MWac solar farm complete

5 MWac solar roof complete

4 petrol stations have EV chargers



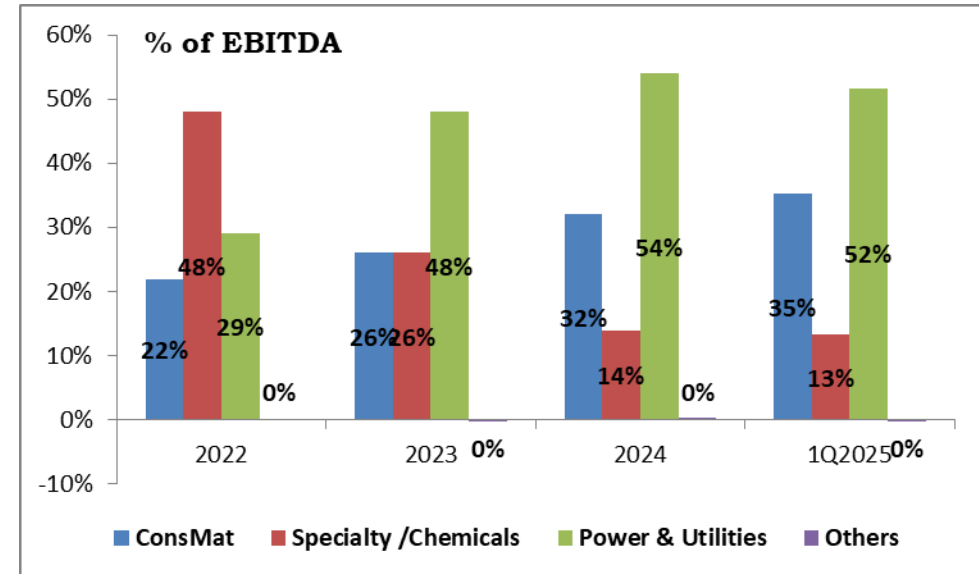
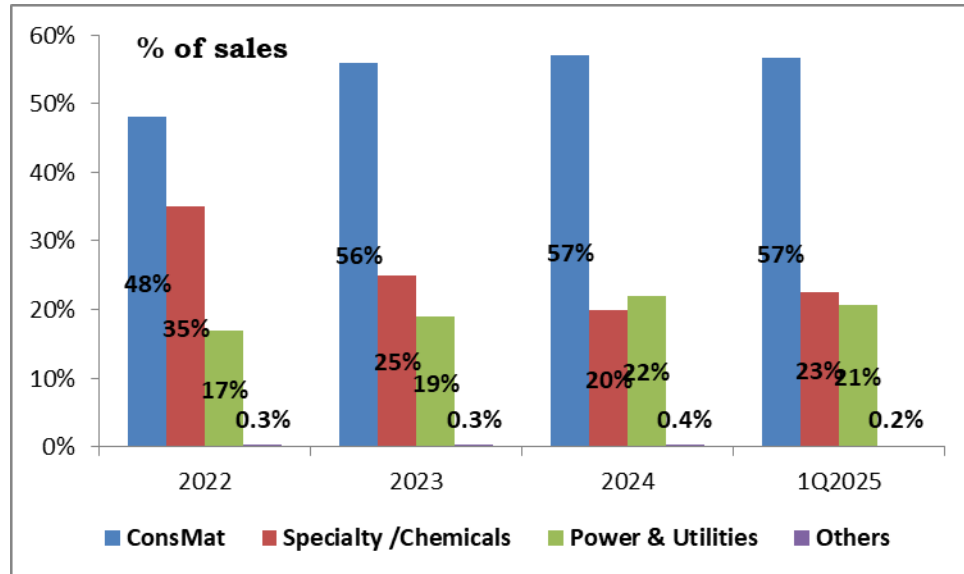
1Q 2025 Overall profitability

THB million	1Q 2024	1Q 2025	Y/Y Chg	Common Size	
				1Q 2024	1Q 2025
Revenue from sales of goods	9,051	9,595	6%	100%	100%
COGS	(7,042)	(7,142)	1%	-78%	-74%
Gross Profit	2,010	2,453	22%	22%	26%
SG&A	(1,162)	(1,110)	-5%	-13%	-12%
Finance cost	(627)	(535)	-15%	-7%	-6%
Tax expense	(75)	(200)	167%	-1%	-2%
Forex gains (loss)	400	22	-95%	4%	0%
Group profit for the period	950	1,011	6%	10%	11%
Profit attributable to the owners	742	723	-3%	8%	8%
Group profit excl forex	550	989	80%	6%	10%
EBITDA	2,504	2,574	3%	28%	27%
EBITDA excluding forex	2,104	2,553	21%	23%	27%

- Sales growth underpinned by better domestic volume (+10%) and resumption of clinker / cement exports (+39%)
- Power volume sales were also higher Y/Y due to improved throughput and some contribution from Green capacity
- Specialty Chemical revenues also improved marginally
- Tax rate rose significantly due to expiry of tax loss carry forward

- Cement gross margin benefitted from cost savings, higher plant efficiency post maintenance shutdown
- Gross margins in Power benefitted from cost efficiency and savings
- Gross margins in Specialty Polymer were lower compared to 1Q 2024 but improved from 4Q 2024 – thanks to nimble switching to polymer that has better spread
- Gross margin in Nitrate improved due to other income (catalyst change), excluding other income gross margin is slightly lower due to change in price
- All the above factors combined, results in gross profit margin rising to 26% vs 22% in 1Q 2024 and EBITDA margins improving to 27% 1Q 2025 vs 23% in 1Q 2024
- **As a result 1Q 2025 sales accounted for 24% of full year guidance and EBITDA accounted for 26% of full year guidance**

1Q 2025 : Participation by segment



- ConsMat remains the largest sales generator for the group, nearly 60%; EBITDA contribution rose to 35% thanks to volume and margin improvement
- Specialty/Chemicals contribution now back to historic norm, slightly over 10% of EBITDA; Nitrate contribution is resilient and supporting the segment contribution
- Power & Utilities remains the group's staple, 21% of sales and 52% of the Group's EBITDA.



1Q 2025: Assets by segment

Assets	2024	1Q 2025	Chg	Breakdown	EBITDA**	EBITDA on Assets
ConsMat	91,591	83,069	-9%	50%	3,623	4%
Specialty Polymers/Chemicals	12,108	13,217	9%	8%	1,367	10%
Energy & Utilities	64,978	65,856	1%	40%	5,319	8%
Agri & Others	2,598	2,594	-0.2%	2%	nm	nm
Total	171,275	164,736	-4%	100%	10,297	6%

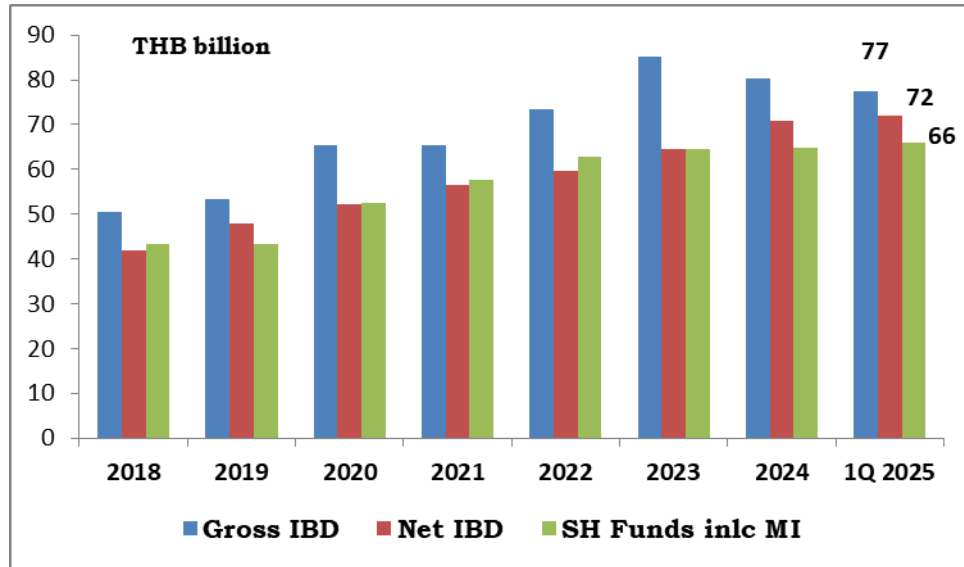
* Excluding unallocated & intragroup assets

** 1Q 2025 annualized

- Capex deployed in 1Q 2025 was THB2,220 million (PPE & Advances); THB993.5 million for TPIPP.
- Construction Material assets dropped as mainly because financial assets were used to repay short term financial obligations
- Energy & Utilities assets grew 1% from the end of 2024 on new solar capacities and partial completion of the plant modification of TG8
- **Annualizing 1Q 2025 EBITDA could result in 6% return on assets (EBITDA/ROA) improving from 5% in 2024**



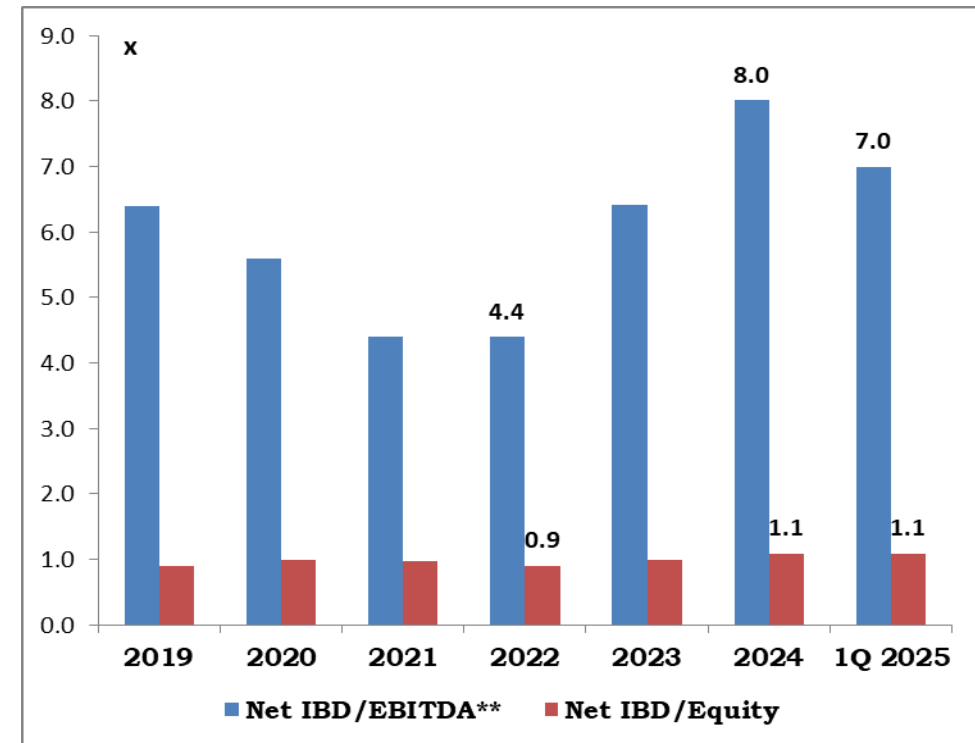
Leverage manageable



Cash/cash equivalents down to THB5,306 million used to repay short term financial obligations

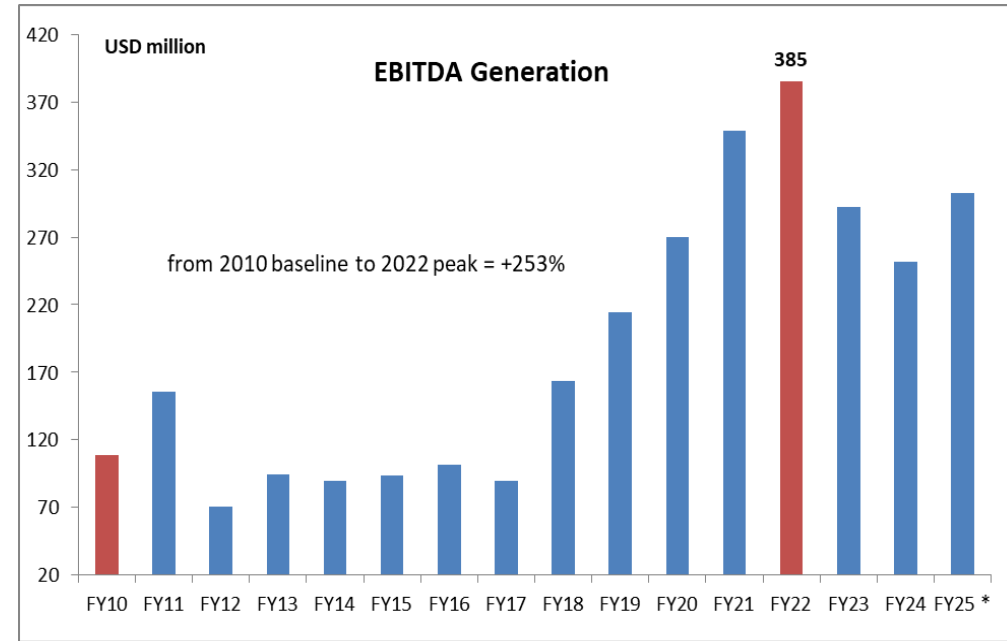
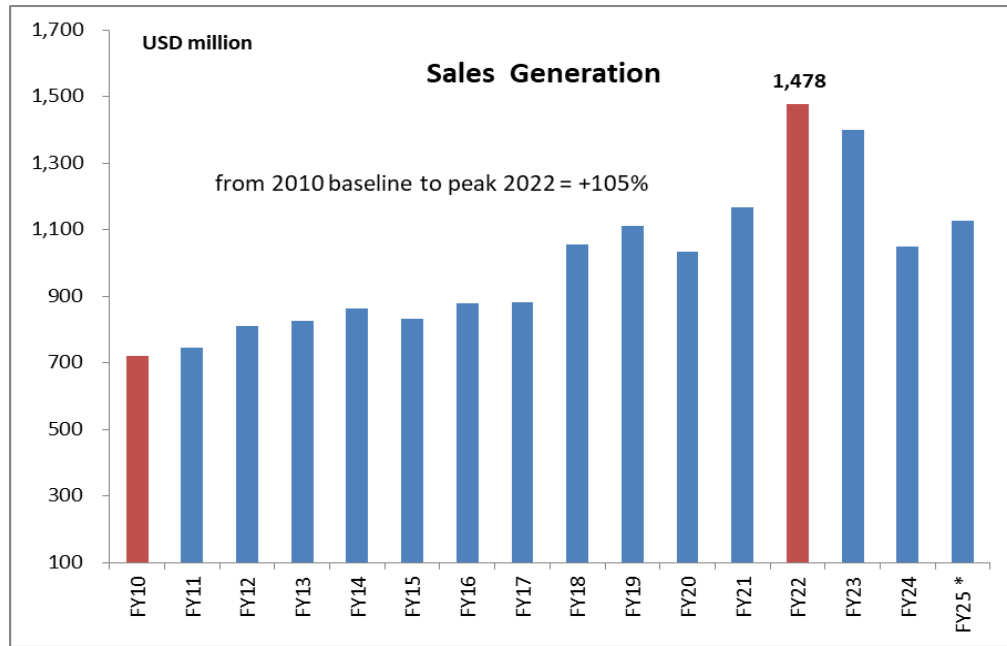
Gross interest bearing debt (IBD) reduced by THB2,932 million but net IBD was up by THB1,323 million

TPIPL TRIS rating A-; Outlook Negative
TPIPP TRIS rating A-; SCAP "a"



**** EBITDA is annualized 1Q 2025**
Average cost of funds for 2024 is c.4%

TPIPL has evolved progressively



* 2025 = Annualized 1Q2025

Unlike peers, TPIPL deployed capex is on ESG investments, improving both efficiency & product quality waste to power capacity expansion. And No bolt-on acquisition.

However, sales generation has been growing significantly starting 2018 due to benefits from ESG/Innovations investments resulting in better price.

105% growth from 2010 to the FY 2022 peak

And, in just over a decade its EBITDA generation more than double the rate of sales growth, by a whopping 253%

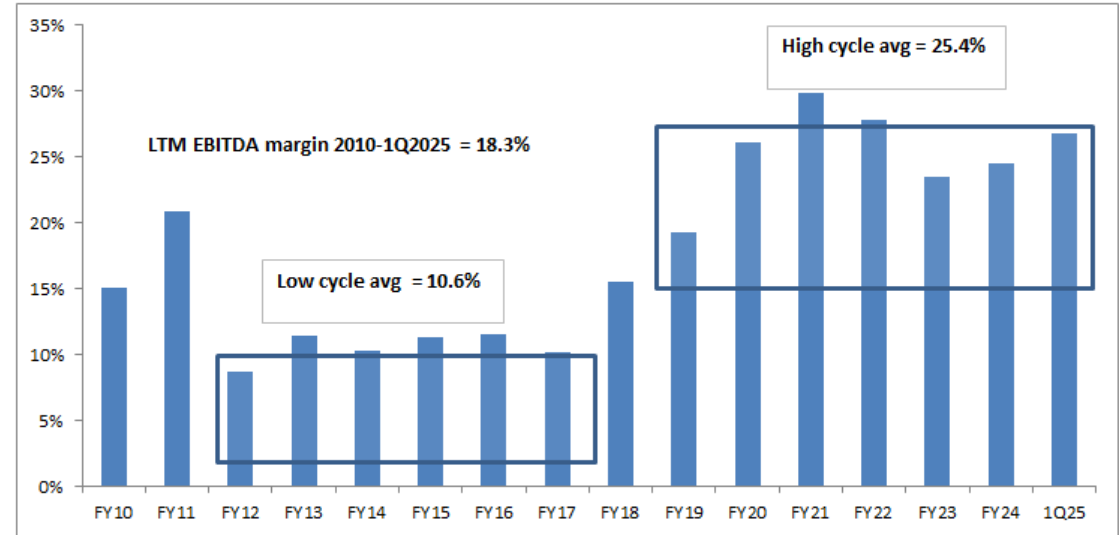
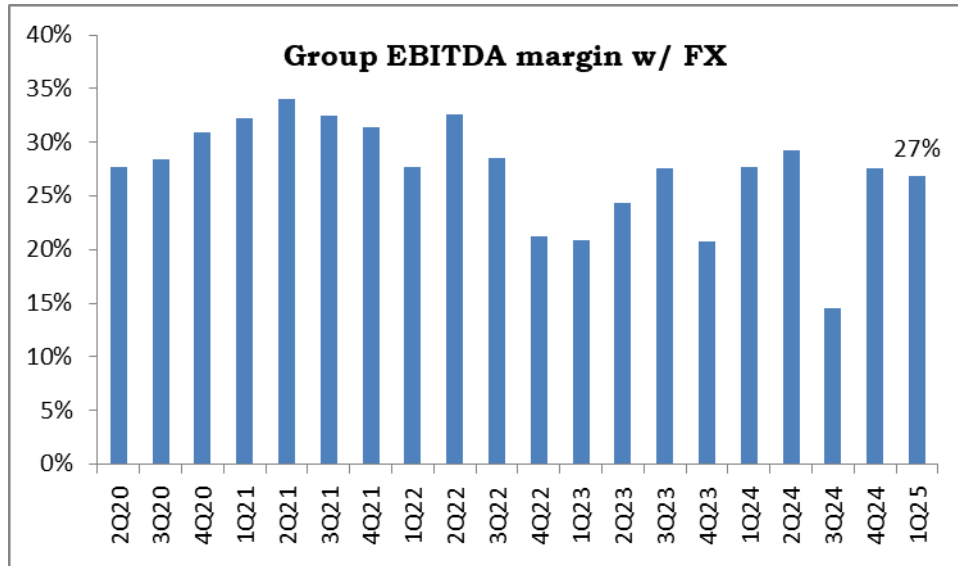
The enhanced capability to yield more profits is largely due to investments in plant efficiency, cost savings and innovations under the precepts of ESG and bio-circular-green economy

The long cycle margins

LTM EBITDA margin – break out:

Long term mean = 18.3 %
 High cycle mean = 25.2%
 Low cycle mean = 10.6%

**F/C >26-30%
 2025-27
 Base Case**



Group’s EBITDA margin has been rising since 2019 driven by :

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

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

TIPL Carbon Neutrality Target = **2043**

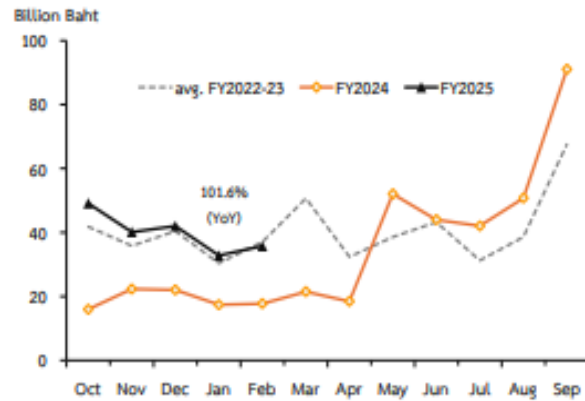
TPIP Carbon Neutrality Target = **2037**



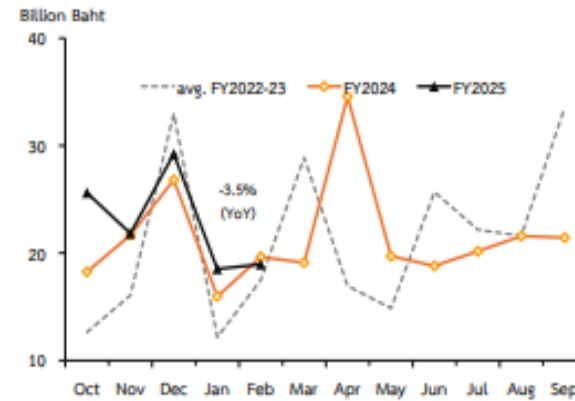
Segment Highlights

Gov't capex spending normalized – better domestic market

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



**State Owned Enterprises
Capital Expenditure**



The government capex up to February 2025 improved significantly from the same period of last year

Producers were able to reduce discounts starting in March and this offset increases in production costs accumulated over several years

The March 28 earthquake did not cause much damage but slowed the project implementation in some projects due to increased number of inspections

Residential construction still soft but commercial construction has improved slightly

THB million

Capital Expenditure Overall

Agencies with significant construction activities

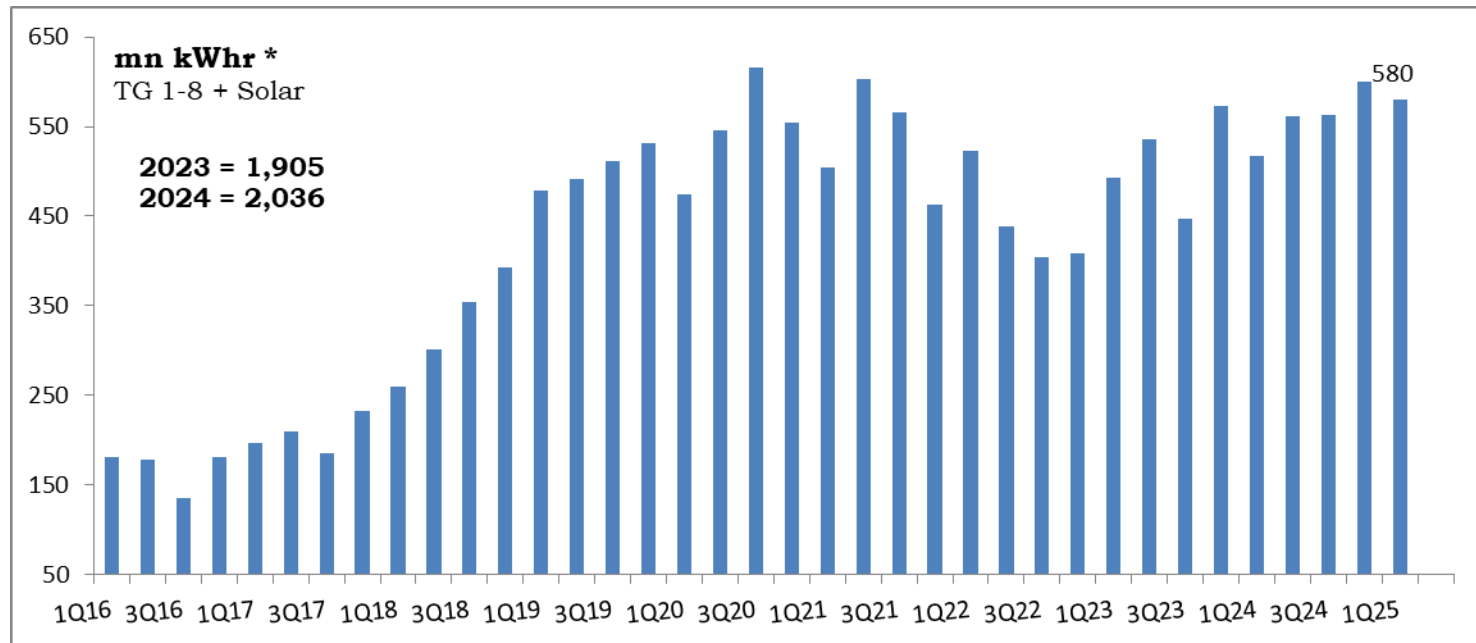
	FY23/24 Budget	FY23/24 Actual	BUR	FY24/25 Budget	% YoY *
Ministry of Agriculture and Cooperatives	84,181.44	59,940.14	71%	87,684.73	46%
Ministry of Transport and Communications	171,485.27	126,723.07	74%	180,876.92	43%
Local Administrative Organizations	17,896.62	11,955.35	67%	44,021.90	268%
Province	19,266.77	5,637.08	29%	19,894.37	253%

* assume 100% budget utilization ratio (BUR)

Source: Budget Bureau



Solid contribution from power



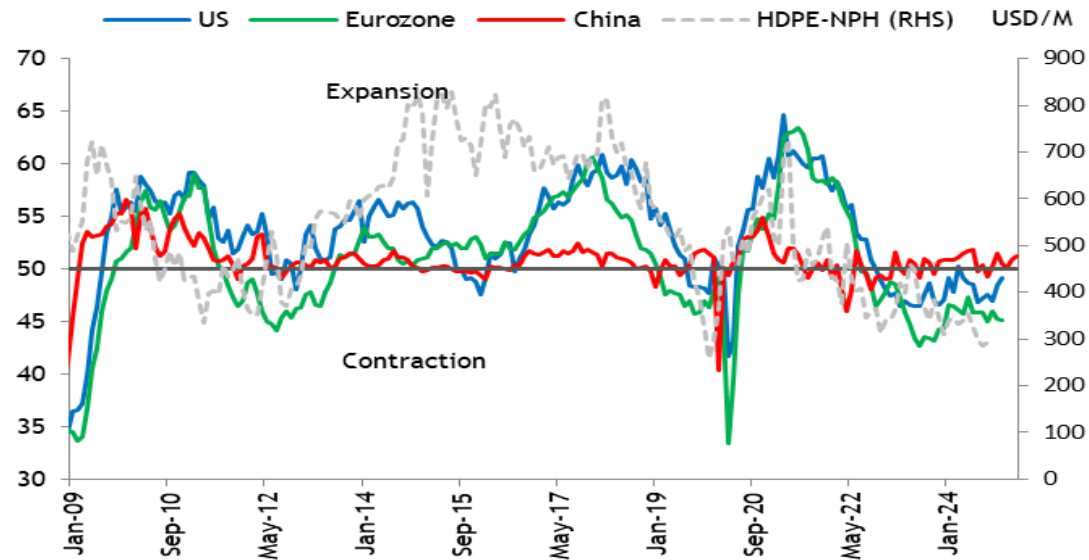
Solid power performance:

Higher plant efficiency and higher throughput that naturally lowers per unit fixed cost

Production cost was also declining from the recent investments in cost savings, plant efficiency

TG8 conversion from coal to MSW is partially complete creating cost savings

Specialty Polymer outlook soft



- Global manufacturing index softened again
- The recovery seen early in the year fizzled particularly in the Eurozone where the slope has turned negative.
- US PMI is now back to contraction mode, though slope is still positive.
- China is still above the 50 tipping line but no major expansion is expected. The government has announced another major stimulus program, (raising the budget deficit target) but that is to offset the effect of tariffs
- Weak outlook overall; In the ASEAN-6 economic activity is projected to take a hit from US Tariff so regional demand will likely soften.
- **Commissioning of new capacities likely to be delayed**

IMF 2025 GDP Growth Projection	Previous	Revised	% Change
ASEAN 6 - average	4.6	3.9	(15.0)
Indonesia	5.1	4.7	(7.8)
Malaysia	4.7	4.1	(12.8)
Philippines	6.1	5.5	(9.8)
Singapore	2.5	2.0	(20.0)
Thailand	2.9	1.8	(37.9)
Vietnam	6.1	5.2	(14.8)



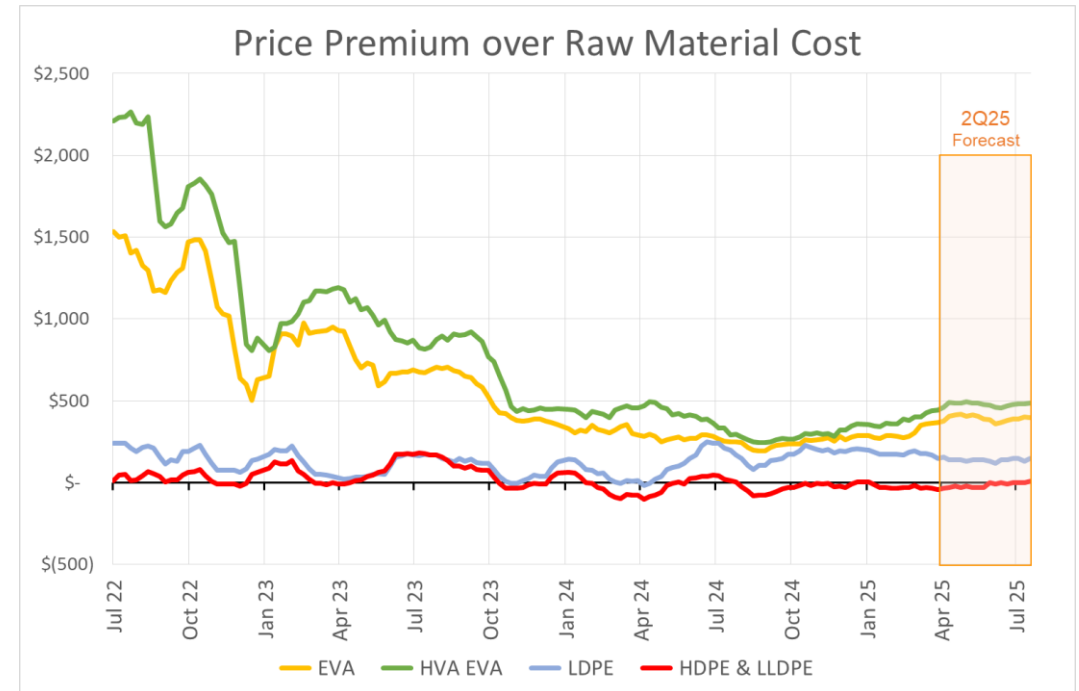
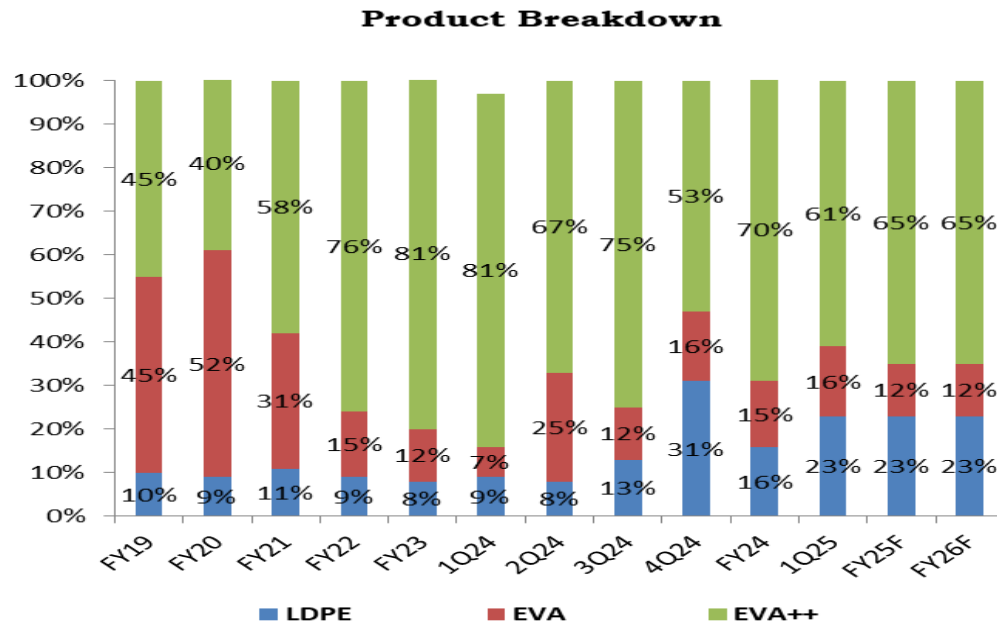
Compiled from Press



Specialty polymer nimble, switching products for better margins

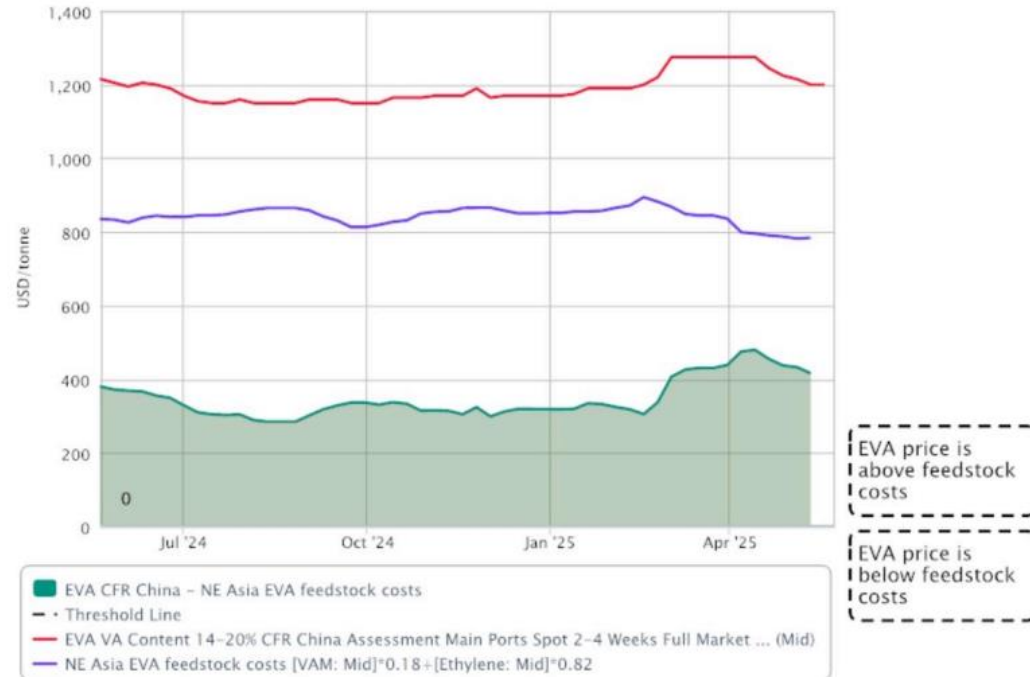
1Q25 still more weight on LDPE, but lower proportion than 4Q24, u-rate 90% installed basis

Comparative spreads EVA better

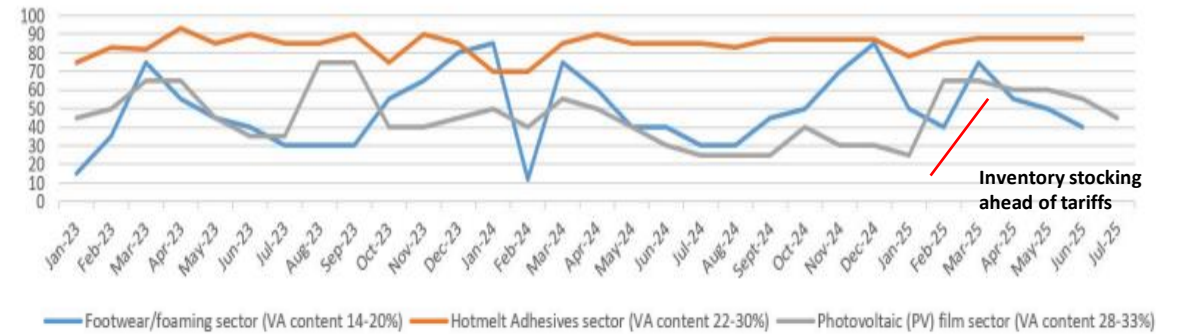


Spreads falling again, post inventory stocking ahead tariffs

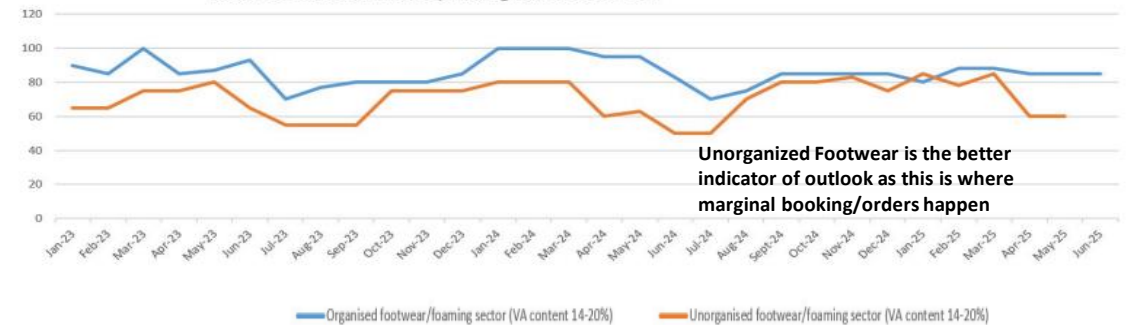
Feedstock costs - EVA northeast Asia



China EVA Downstream Plant Operating rates 2023-2025



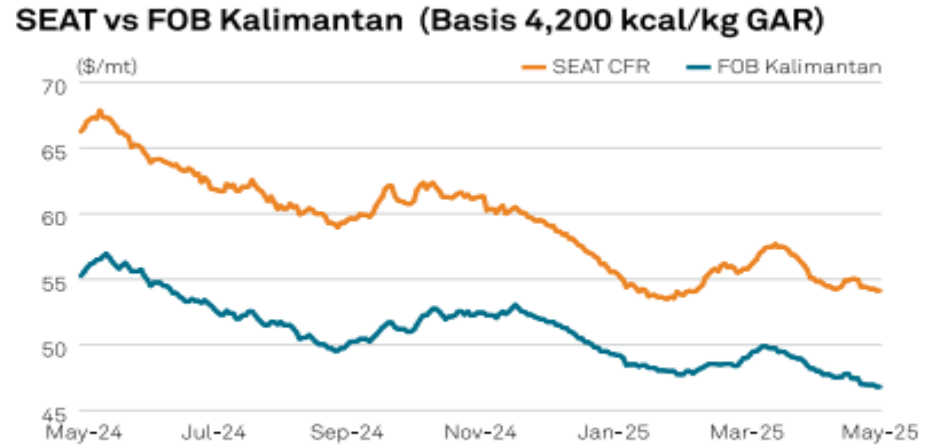
India Downstream Plant Operating Rates 2023-2025



Improvement in EVA++ sales due to better demand from PV and more contribution from innovative specialty polymer

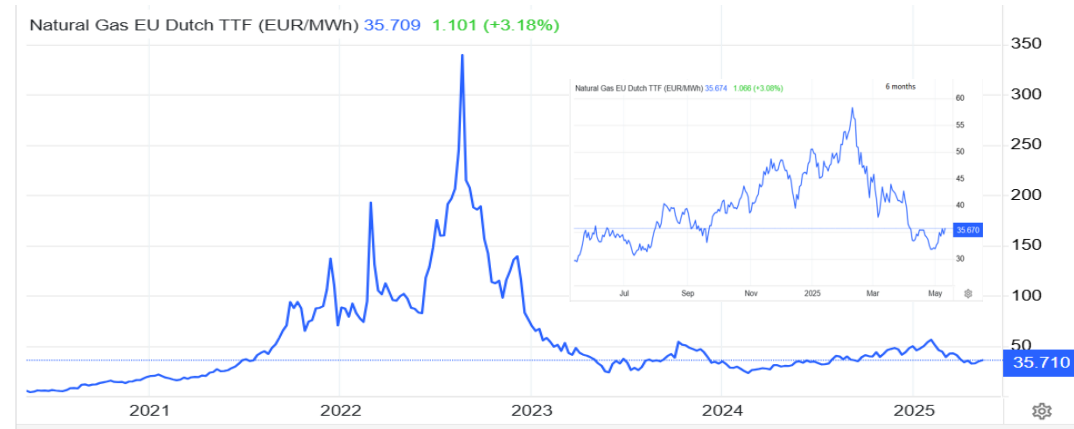
Energy prices very manageable

Coal prices off the 2021/22 highs...



Source: S&P Global Commodity Insights

... and volatile gas prices may influence Ft adjustments



Source: tradingeconomics.com

Coal prices low

The recent uptick in Gas Prices not likely to be sustained



Maintain guidance and targets

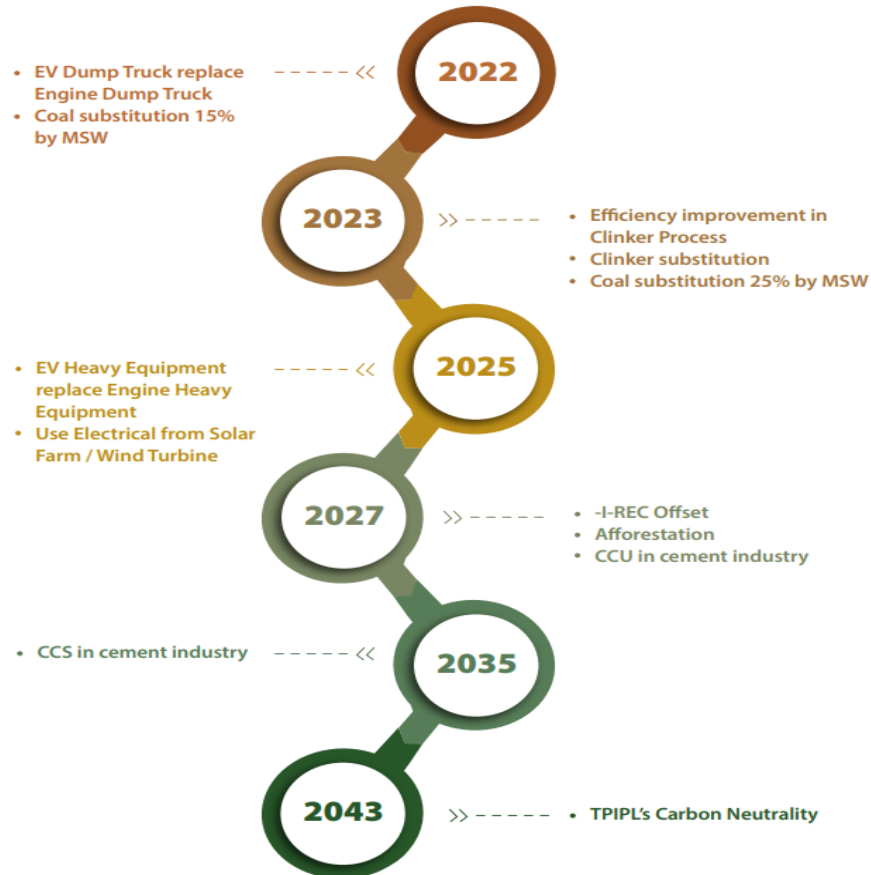
THB m	Program 2021-2025	Deployed	Remaining	2025	2026	2027	2028	Expectations: Five-year payback
TPIPL	8,504	7,079	1,425	1,425	-	-	-	
TPIPP	13,637	8,941	4,696	4,011	443	173	68	
Group	22,141	16,020	6,121	5,436	443	173	68	

Financials	Net IBD	Net IBD /Equity	Net IBD/EBITDA	EBITDA/Interest
Key Metrics	THB b	x	x	x
2023A	64	1.0	6.4	3.5
2024A	71	1.1	8.0	2.7
2025G	72	1.1	7.1	3.0
2026G	66	0.9	5.7	3.5
2027G	58	0.8	4.5	4.1

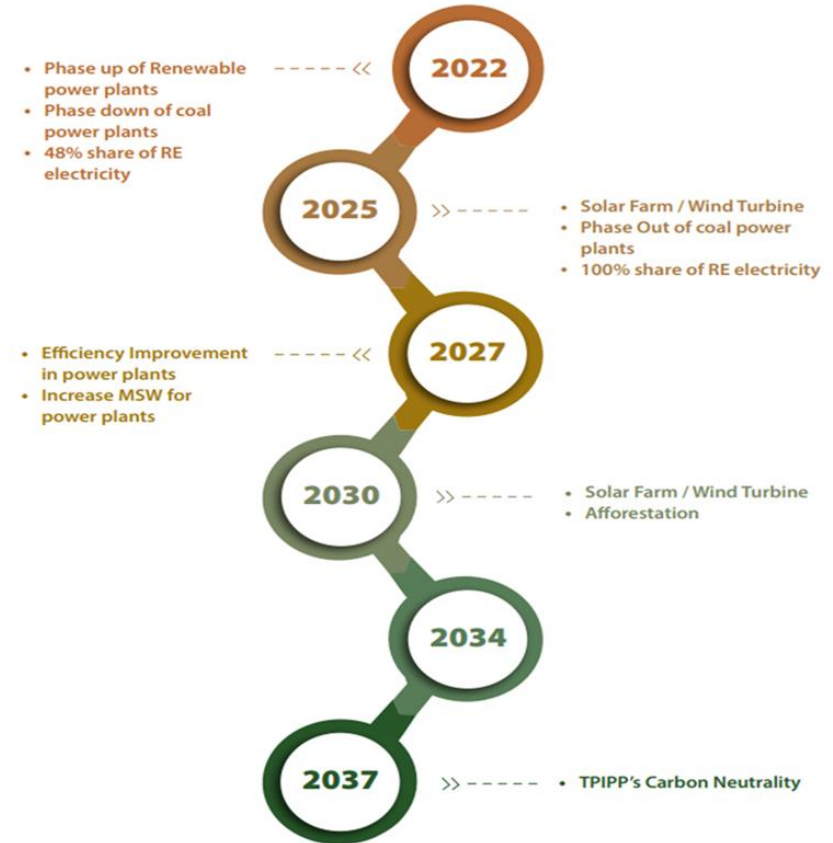
Notes: EBITDA, Equity projections are based on base case assumptions
 As current capex program goes off ramp starting 2026, there is scope for a faster deleveraging especially that we will begin to reap increasing sustainability benefits from our heavy ESG investments in the recent past years, particularly during 2023-2026.

Sustainability – maintain carbon neutrality targets

TIPL's (Cement) GHG Reduction Strategies



TIPIP's GHG Reduction Strategies



Sustainability strides 2024 and 1Q 2025

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

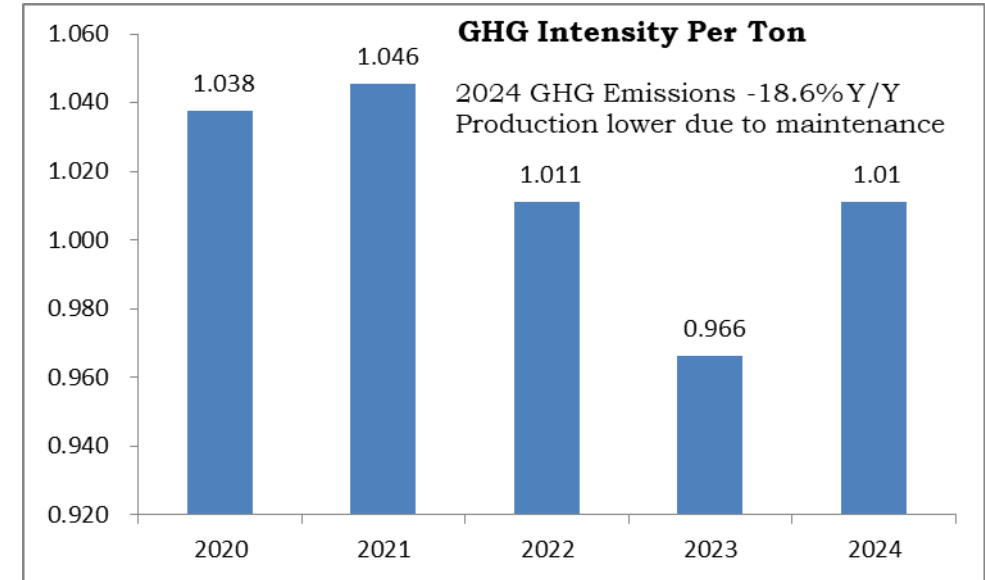
- 3.1 operates W-H-R to electricity
- 3.2 improves the heat recovery and filter systems

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



Strides in 1Q 2025:

- GHG emission down 9.67% Y/Y
- Electricity consumption down 11.5%
- 45% of water consumption is from recycled effluents
- 99.41% of industrial waste generated are recycled as AFRs and materials; internal target is $\geq 95\%$
- T-VER certified carbon credits = 2,022,585 tCO₂eq
- RECs (Renewable Energy Certificates) = 2,953,063 units



**The End
Thank you
Q&A**