

# Thailand Energy Sector

## Oil prices supported by geopolitical risks while natural gas prices decline on warm weather, ample storage

### Rising US inventories

- US crude oil inventories increased by 2.9m bbls WoW for the week ending 15 Dec. At the same time, gasoline inventories grew 2.7m bbls WoW but remain 2% below the 5-year average. Distillate inventories also rose 1.5m bbls WoW and are about 10% below the 5-year average.
- US oil output: increased by 200kbd to 13.3mbd. On a YoY basis, output has increased by 1.2mbd.
- Net speculative position: CFTC reported the net speculative position has fallen to 151.6k contracts as of 16 Dec, having fallen by more than 50% since the recent high in late Sep. This is also the lowest level since 8 Jul and is close to the multi-year low level reached earlier that month.

### Rebel attacks in Red Sea up-end oil shipping

- Background:** The Houthis rebels in Yemen launched attacks on ships carrying goods to/from Israel and those owned by Israeli citizens/companies. This has significantly increased risks for crude oil and oil product shipping through the Red Sea. Despite a US-led international response, 'Operation Prosperity Guard', several companies chose to sail longer routes and avoid the Red Sea entirely.
- Ship re-routing:** Major shippers such as Maersk and Evergreen have already re-routed their ships to avoid the Red Sea. Among energy firms, Norwegian gas giant Equinor implemented re-routing plans while BP became the first oil major to pause all shipments through the Red Sea.
- Impacts on energy prices:** About 8% of global crude and oil products and 4-8% of LNG cargo traverses the Red Sea. The attacks on shipping have introduced both direct and indirect costs. For example, insurance fees jumped 10x to 0.5-0.7% of the value of a ship from just 0.07%. Ships sailing via longer routes (Cape of Good Hope instead of transiting through Suez Canal) also take more time and incur significant additional charter and bunker costs. Indirect costs include inefficient logistics and more oil on water, which could negatively impact petroleum product supply from the Middle East and India to Europe and crude oil shipments from Russia to China and India.

### Global gas prices continue to fall

- Falling gas prices:** Asian spot LGN price (JKM) fell below USD12/mmbtu in recent days. The price has fallen from over USD40/mmbtu at the beginning of the year. Meanwhile, Europe's natural gas benchmark (TTF) fell to EUR34/MWh (about USD11/mmbtu) from over EUR80/MWh early this year. Prices in the US (Henry Hub) have corrected to USD2.4/mmbtu, less than half the level at the beginning of the year.
- Exceptionally warm weather:** A major reason for global decline in gas prices is the exceptionally warm weather this winter. According to Copernicus, Nov 2023 was the warmest Nov on record (data going back to 1940). 2023 as a whole saw six record-breaking warm months.
- Ample storage:** Europe's gas storage remains close to its maximum level for this time of year. At 99 Bcf, storage now is 10% above last year's level. In the US, storage is at 3,664 Bcf, or about 7.6% above the 5-year average for this time of year.

### WoW price movements of petrochemical products (% and USD)

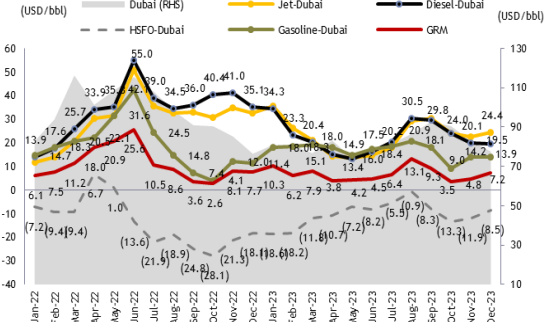
	Dubai crude	Jet-DB	Diesel-DB	FO-DB	Gasoline-DB	Naphtha-DB	GRM	HDPE-Naphtha	PP-Naphtha	Bz-ULG95	Px-ULG95
This week	76.0	24.5	20.2	(7.8)	14.4	(2.6)	8.6	298	248	92	213
Last week	76.1	25.3	19.4	(8.5)	13.2	(6.2)	6.7	320	280	77	205
% Chg	(0.1)	(3.2)	4.2	8.0	9.3	57.7	28.5	(7.0)	(11.6)	20.0	3.7
USD chg	(0.1)	(0.8)	0.8	0.7	1.2	3.6	1.9	(22.4)	(32.4)	15.4	7.6

Sources: Bloomberg, MST

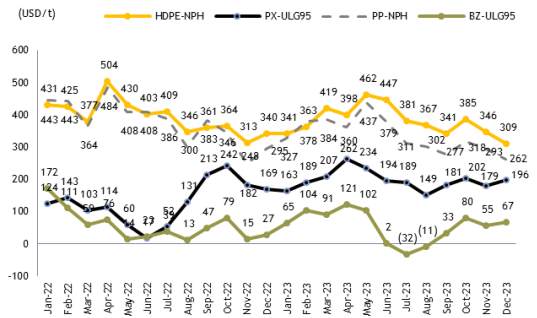
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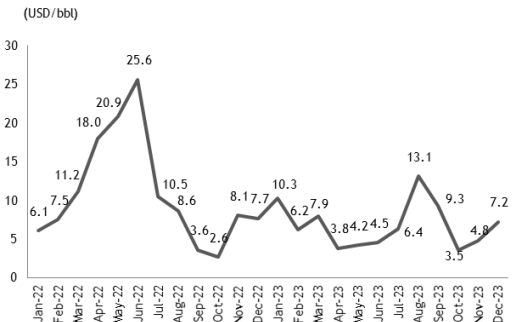
### Refined crack spreads - average monthly (USD/bbl)



### Key petrochemical spreads - monthly (USD/t)



### Singapore GRM - monthly (USD/bbl)



Note: Last data entries are the running averages for the current month Source: Bloomberg

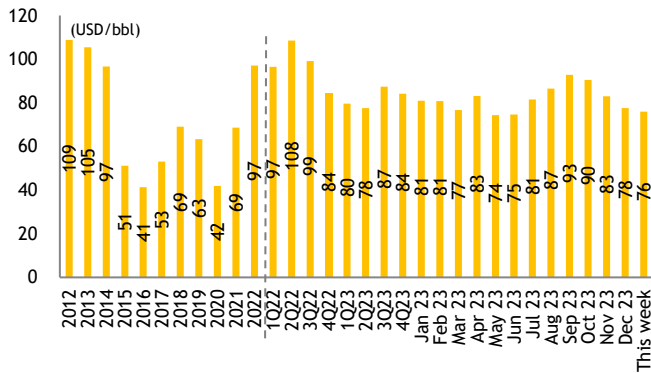
Energy

Thailand



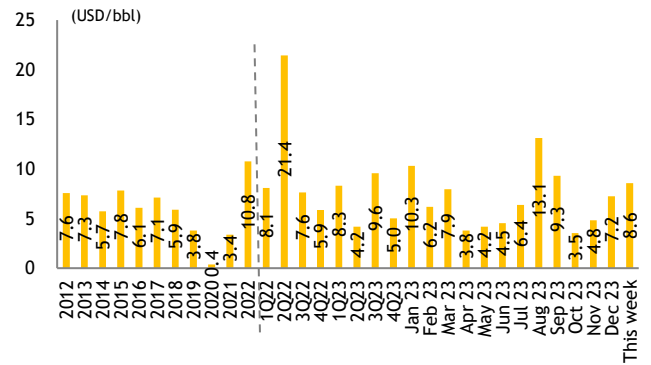
Key spreads in charts

Dubai crude oil price (average)



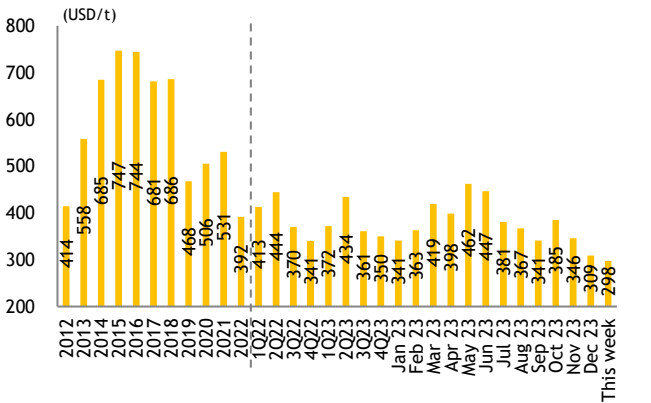
Source: Companies, Bloomberg, MST

Singapore complex GRM (average)



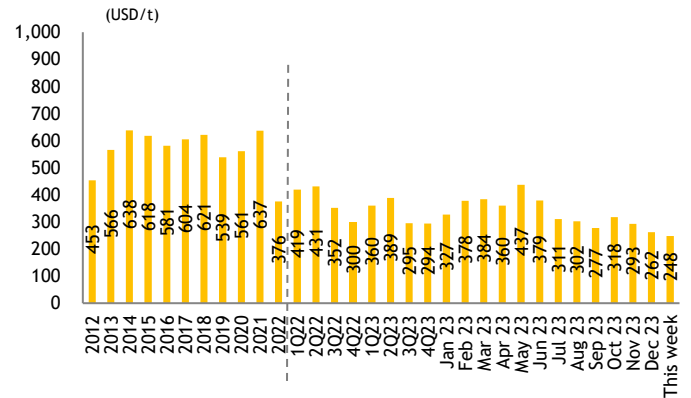
Source: Companies, Bloomberg, MST

HDPE-naphtha (average)



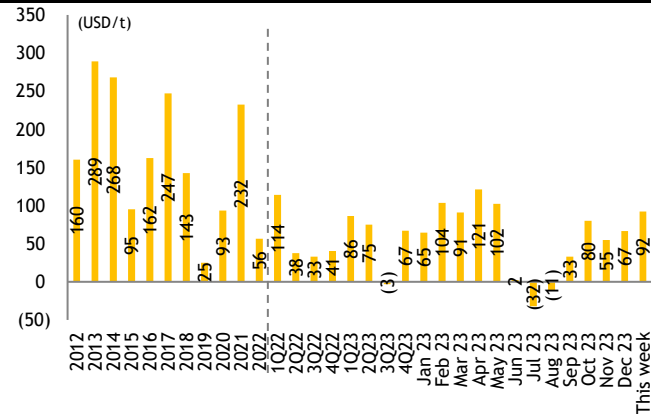
Source: Companies, Bloomberg, MST

PP-naphtha (average)



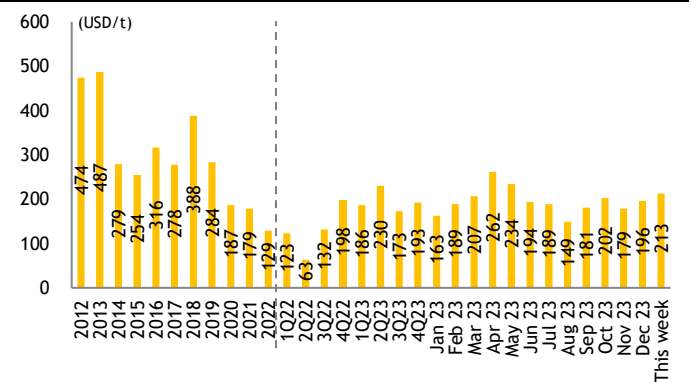
Source: Companies, Bloomberg, MST

Benzene-ULG95 (average)



Source: Companies, Bloomberg, MST

Parxylene-ULG95 (average)



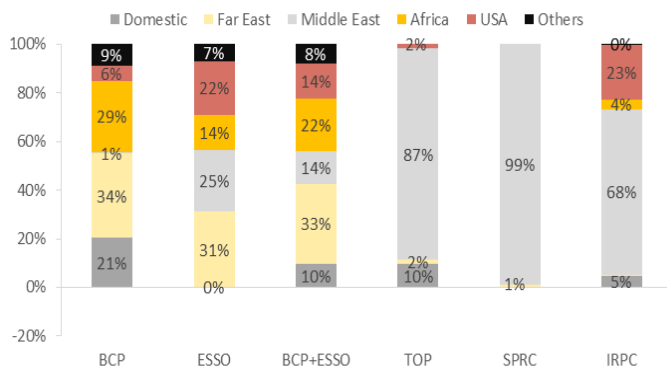
Source: Companies, Bloomberg, MST

### Thai downstream capacity breakdown and comparison

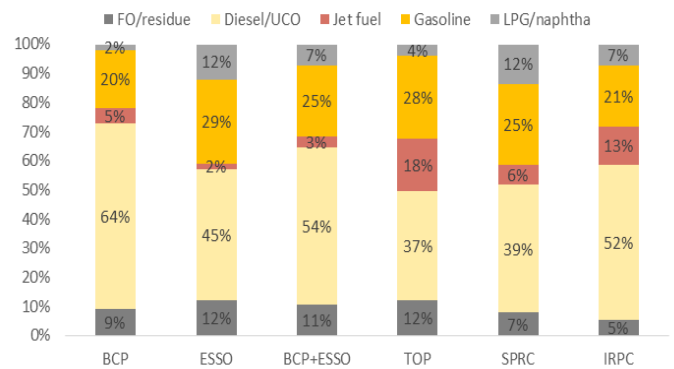
	SCC	PTTGC	IRPC	TOP	BCP	ESSO	SPRC	IVL	Total
Key product	HDPE	HDPE	PP	Refinery	Refinery	Refinery	Refinery	Polyester	
<b>Capacity breakdown</b>									
<b>Refining capacity (kbpd)</b>	-	280	215	275	120	174	175	-	1,239
<b>Production yield (%)</b>									
LPG		-	11	5	2	5	4		27
Jet		17	9	21	5	3	2		57
Gasoline			20	27	20	24	29		120
Naphtha		16	3	-	-	3	6		28
Diesel		46	38	37	53	42	39		255
Fueloil		12	10	10	8	8	4		52
Others		9	9		12	15	16		61
<b>Lube base (ktpa)</b>	-	-	320	267					587
<b>Aromatics (ktpa)</b>	540	2,419	367	838		500			4,664
Paraxylene		1,310		527		500			2,337
Benzene	360	697	114	259					1,430
Toluene		50	132						182
Mixed Xylene	180	76	121	52					429
Others		286							286
<b>Olefins (ktpa)</b>	3,400	2,988	1,221						7,609
Ethylene	2,100	2,376	433						4,909
Propylene	1,300	512	732						2,544
Others		100	56						156
<b>Other downstream (ktpa)</b>	4,590	6,298	1,225	75	-	-	-	13,695	25,883
HDPE	980	850	140						1,970
LDPE	152	300							452
LLDPE	665	800							1,465
PP	860	810	775						2,445
PS	70	90	125						285
ABS/SAN			185						185
PVC	886								886
EO-based		473						550	1,023
Green chemical		904							904
Pheno/BPA		954							954
Propylene oxide	390								390
Specialty Elastomer	220								220
SM	340								340
PTA		970						5,297	6,267
PET	27	147						5,666	5,840
Fiber and yarn								2,182	2,182
LABIX				75					75
<b>Power (MW)</b>			343	497	477				1,317
<b>Petrol station</b>					1,253	721			1,974

Source: Companies, MST

### Thai refiners and their crude slates...



### ...and their product slates



Source: Companies

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