




# Energy To the future

 **Tüpraş**

 **Koc** | April 2024

Investor Presentation

# Disclaimer

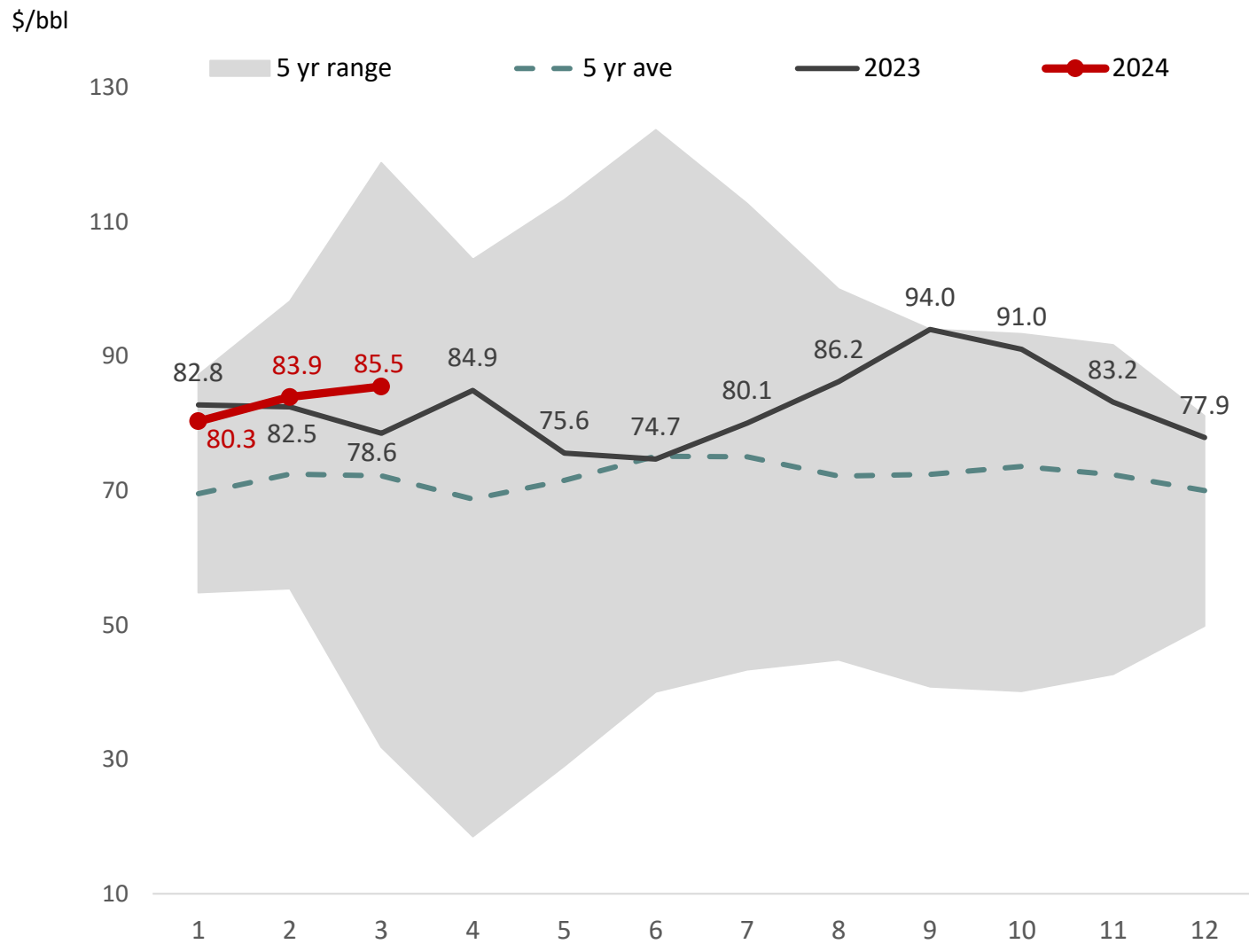
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# Refining Market

# Brent Crude Prices



- + Russian-Ukraine war
- + Impact of sanctions
- + Post-pandemic demand recovery
- + OPEC+ cut decisions
- + New trade dynamics

- Continued Non OPEC supply
- Geopolitical tensions
- Concerns over economic slowdown

Year	Average Brent Prices (\$/bbl)
2019	64.3
2020	41.7
2021	70.7
2022	101.2
2023	82.6

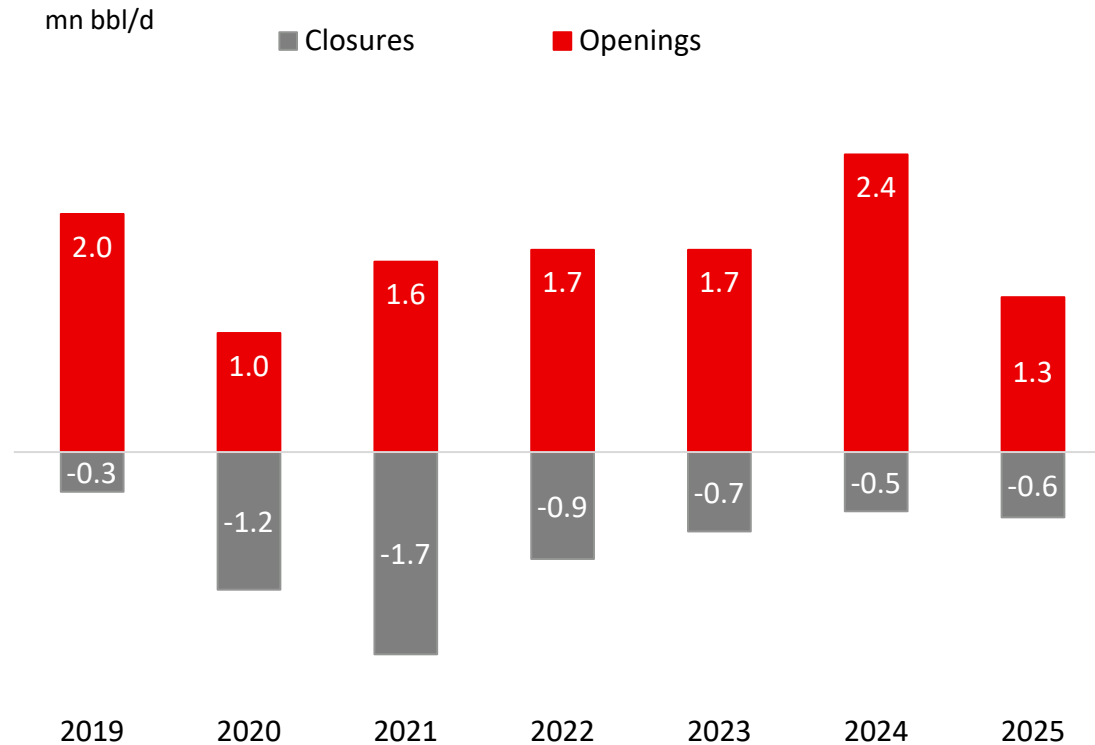
Data as of 31 March, 5 year range shows 2019-2023

# Global Refinery Capacity Changes

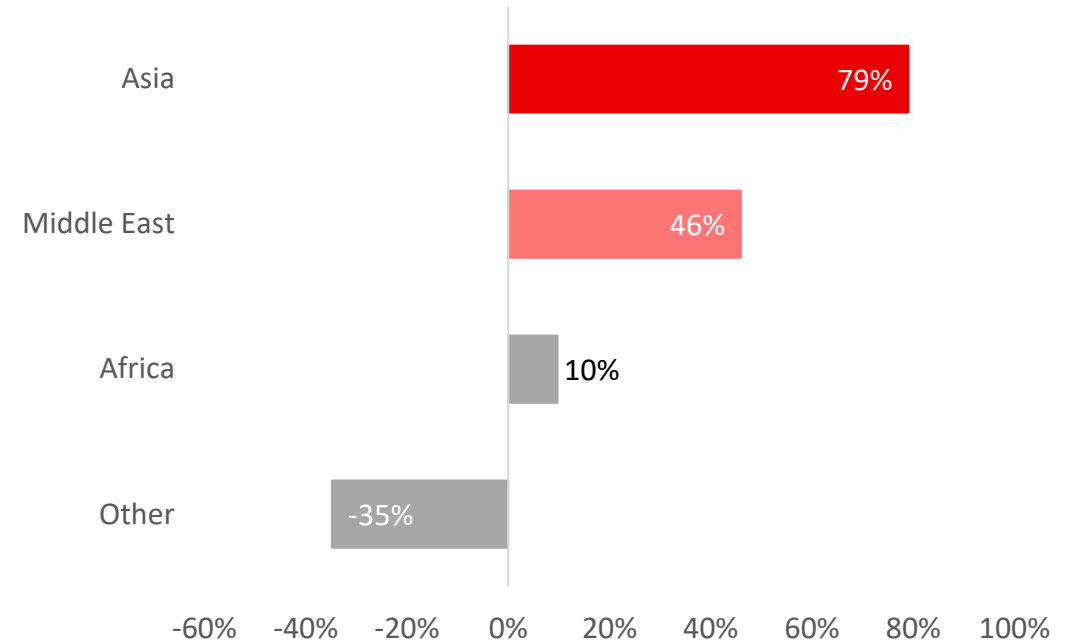
## Expectations until 2025:

- In the 2019-2025 period, 79% of the net capacity increase comes from Asia and 46 % from the Middle East Region.
- 63 % of the closures intensified after the pandemic come from the OECD region.

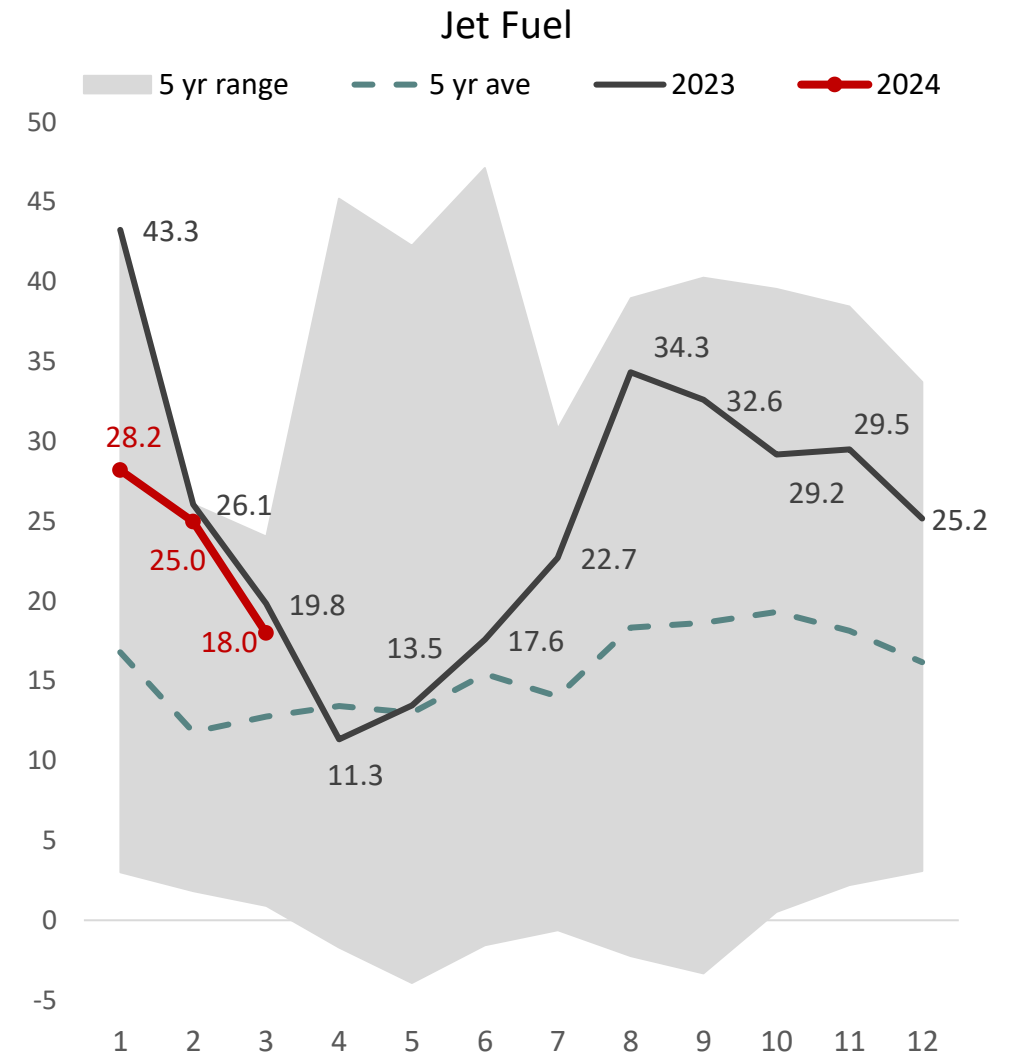
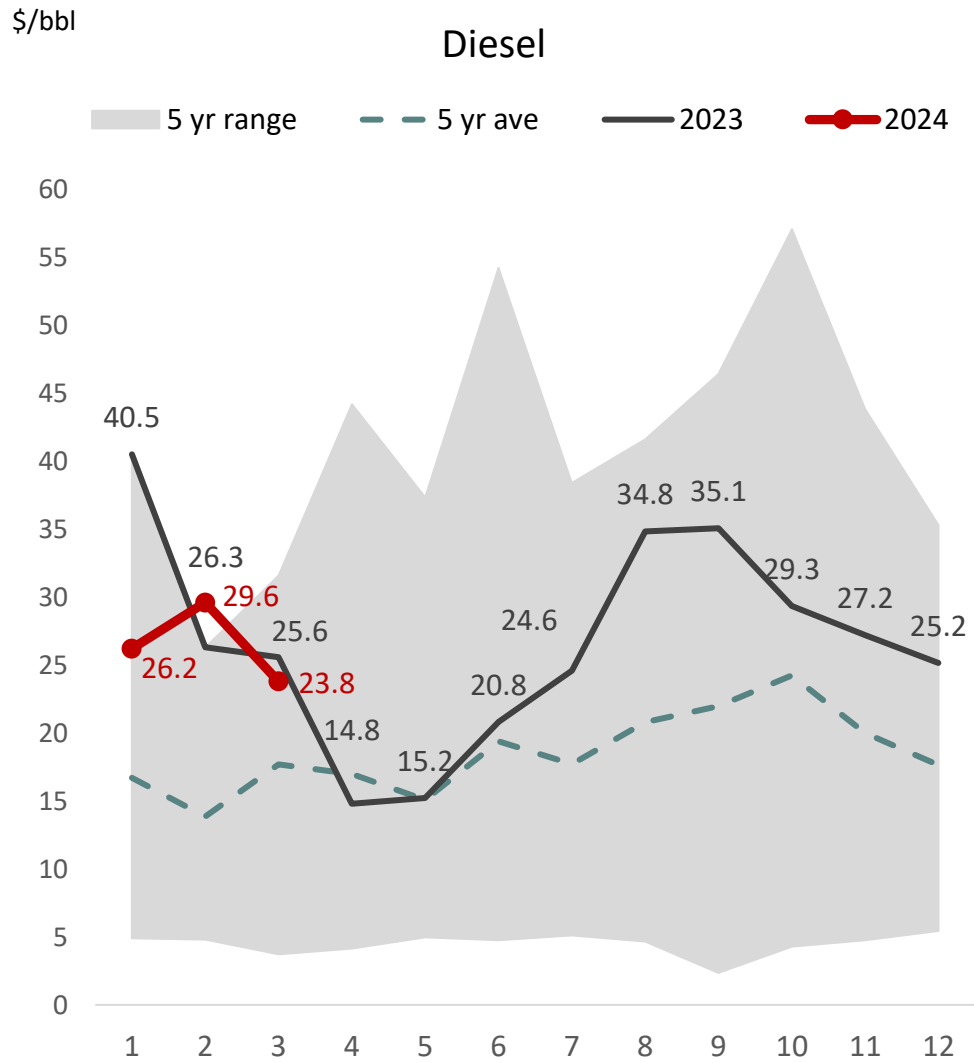
### 2019-2025 Net Capacity Additions



### Capacity Additions by Region

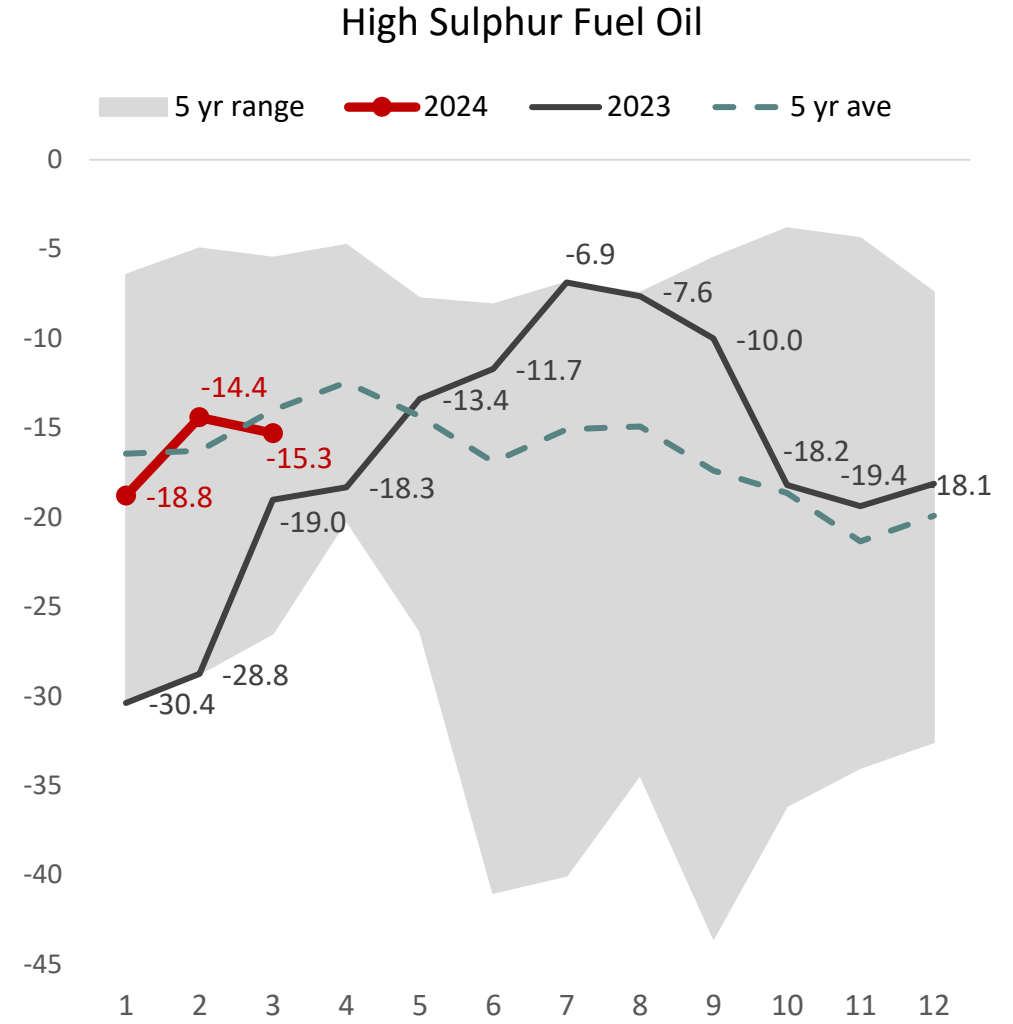
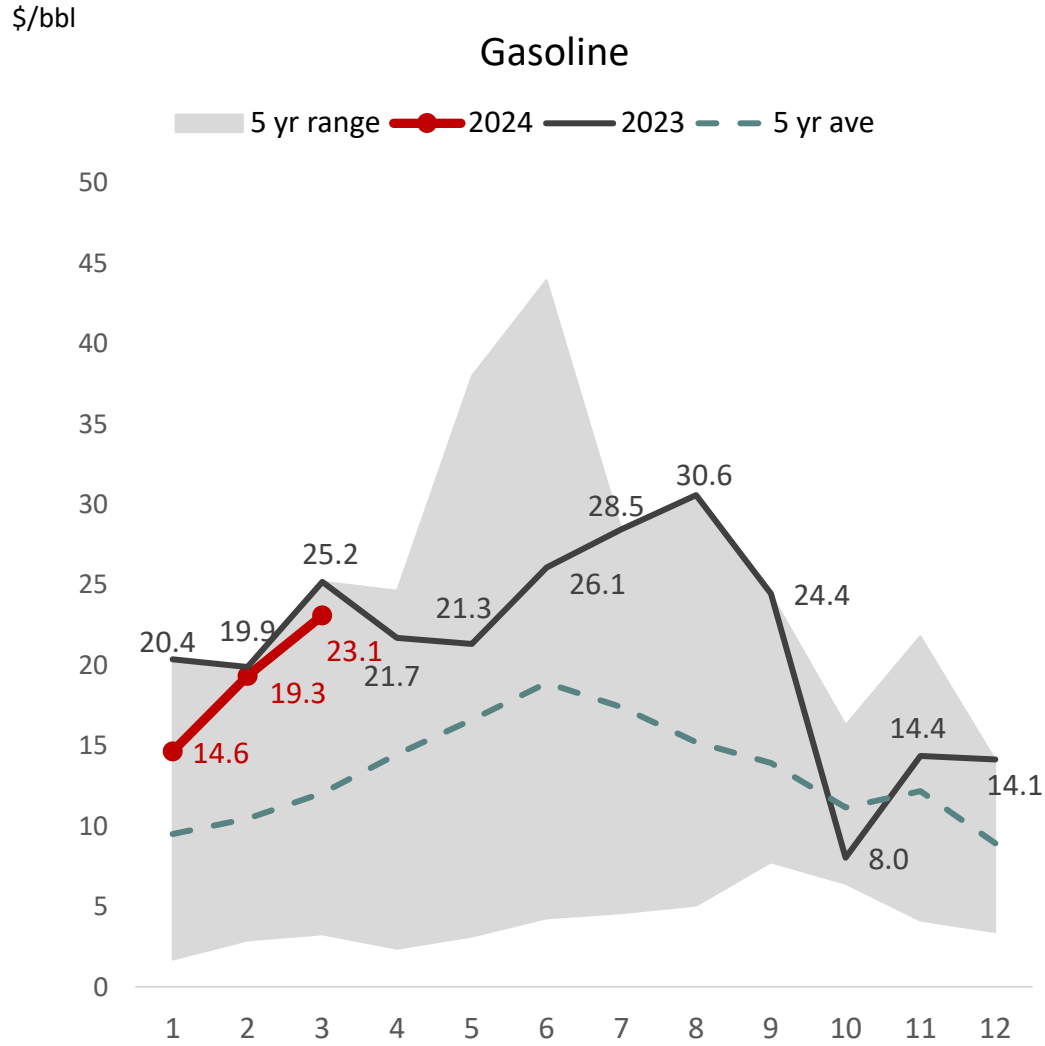


# Middle Distillate Cracks



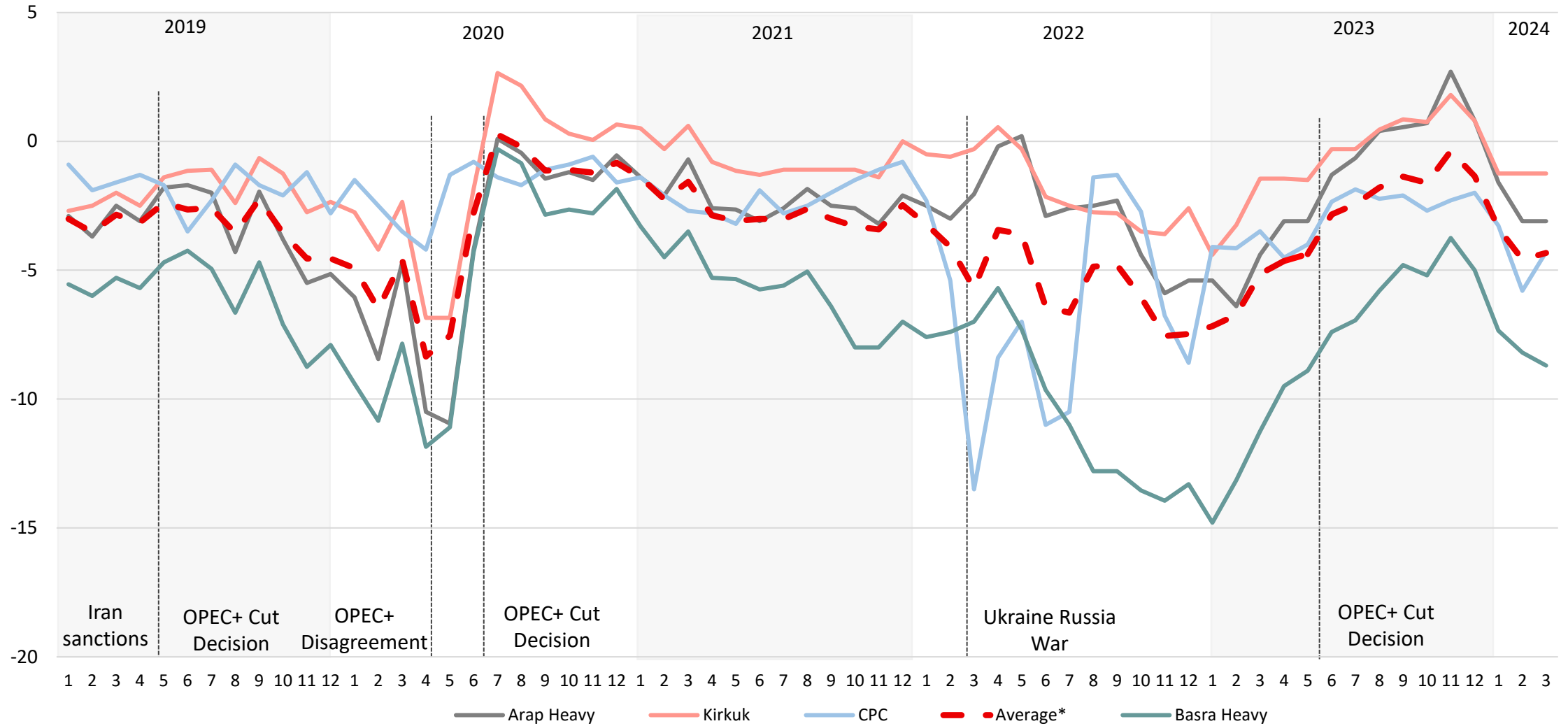
Data as of 31 March, 5 year range shows 2019-2023

# Gasoline and High Sulphur Fuel Oil Cracks



Data as of 31 March, 5 year range shows 2019-2023

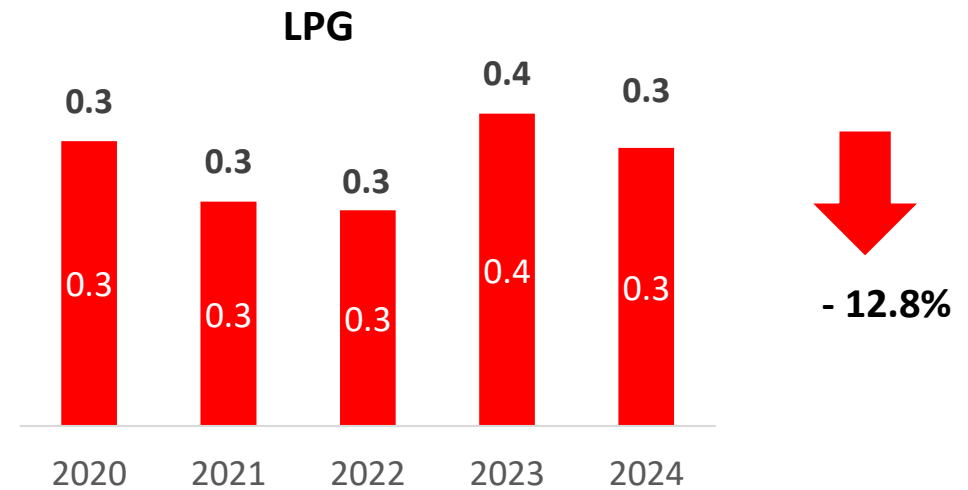
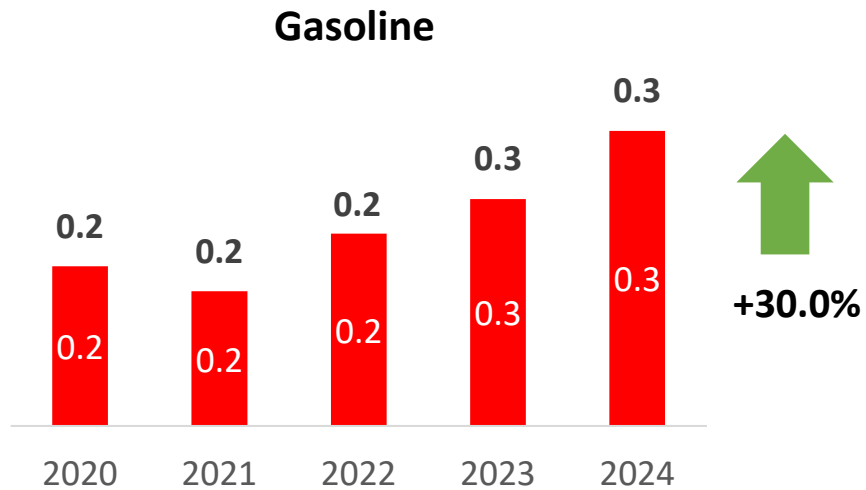
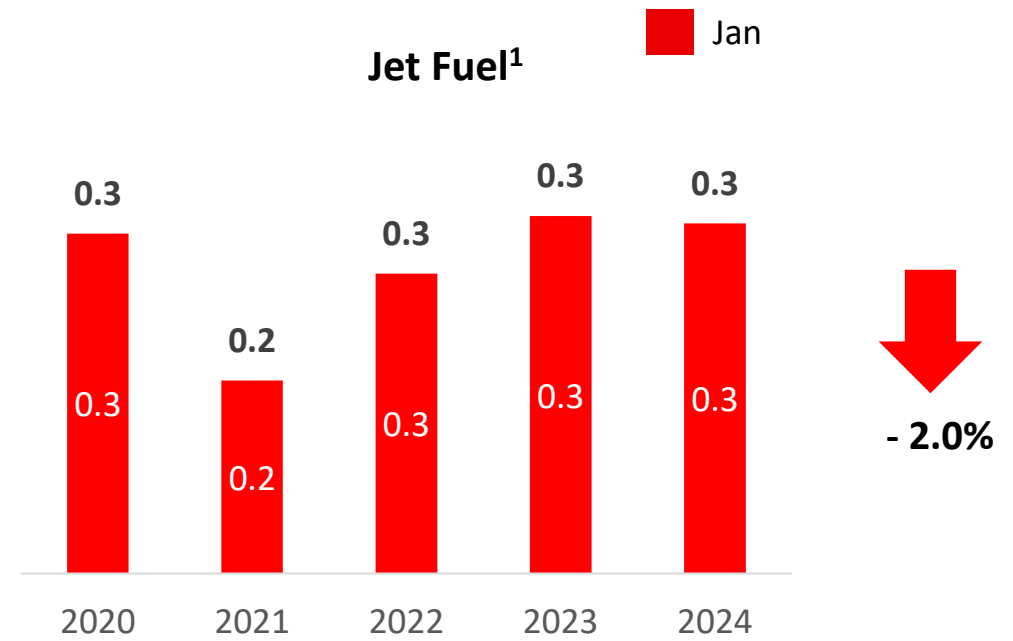
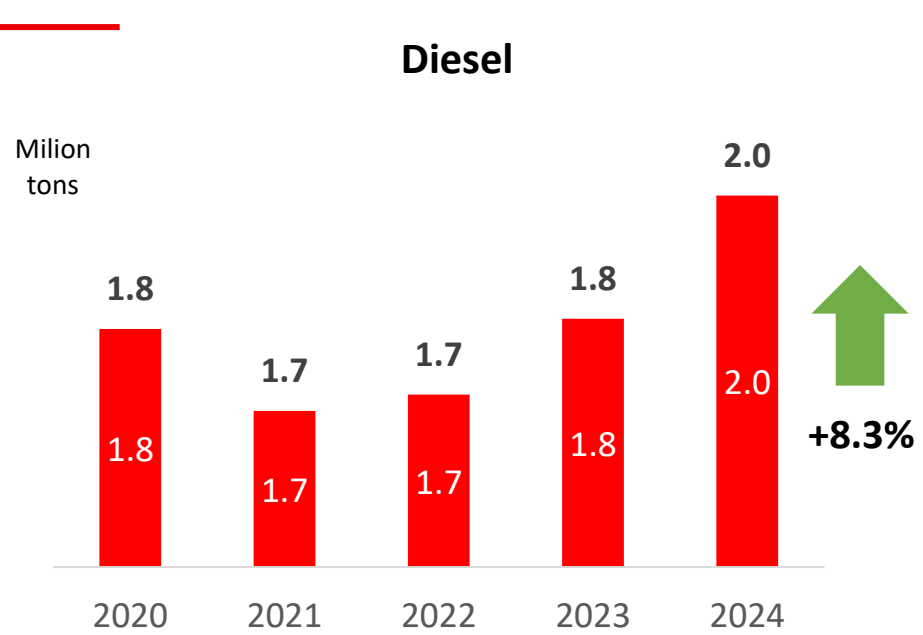
# Heavy Crude Differentials to Brent (\$/bbl)



Data as of 31 March

\*Simple average of listed differentials

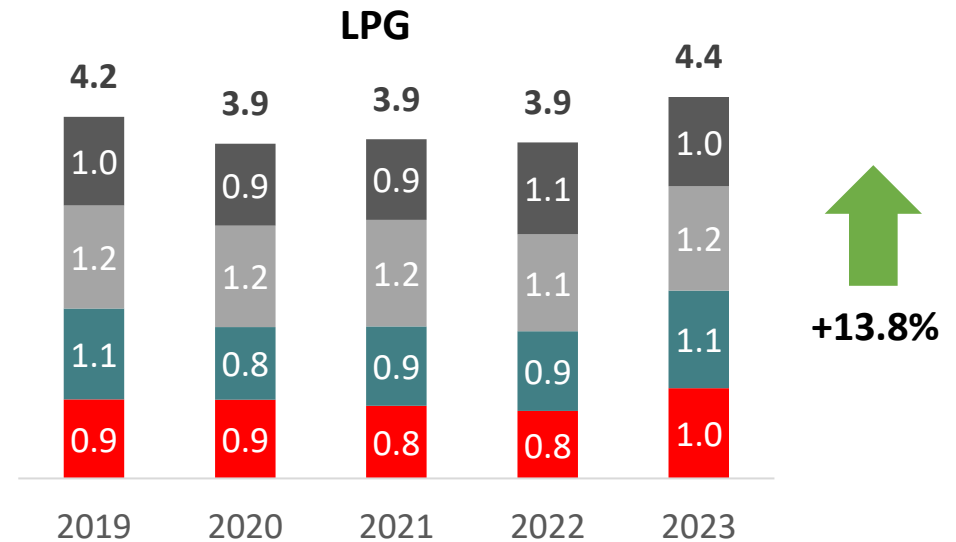
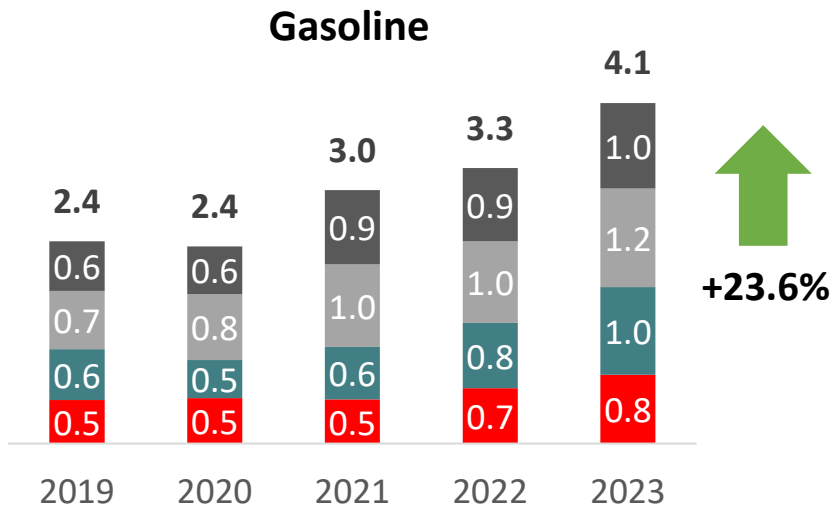
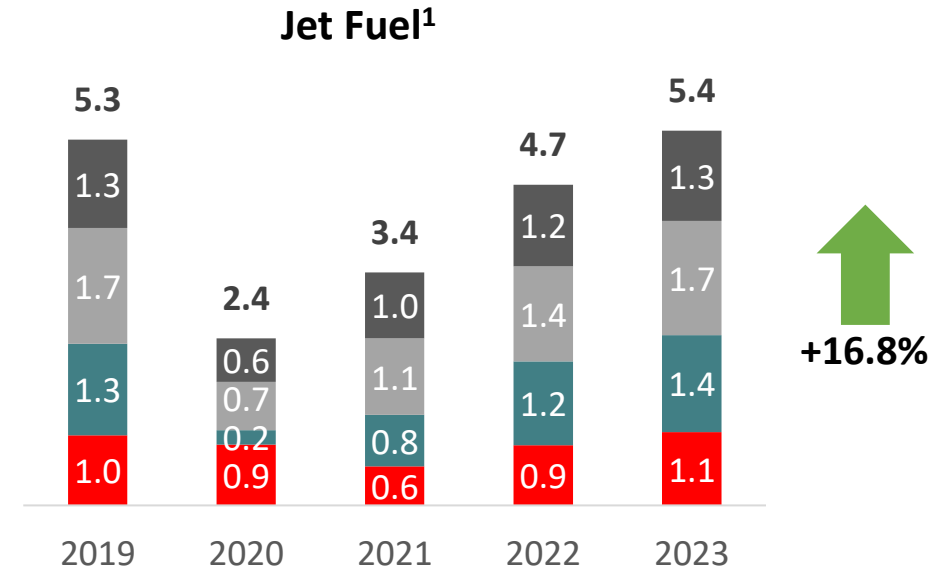
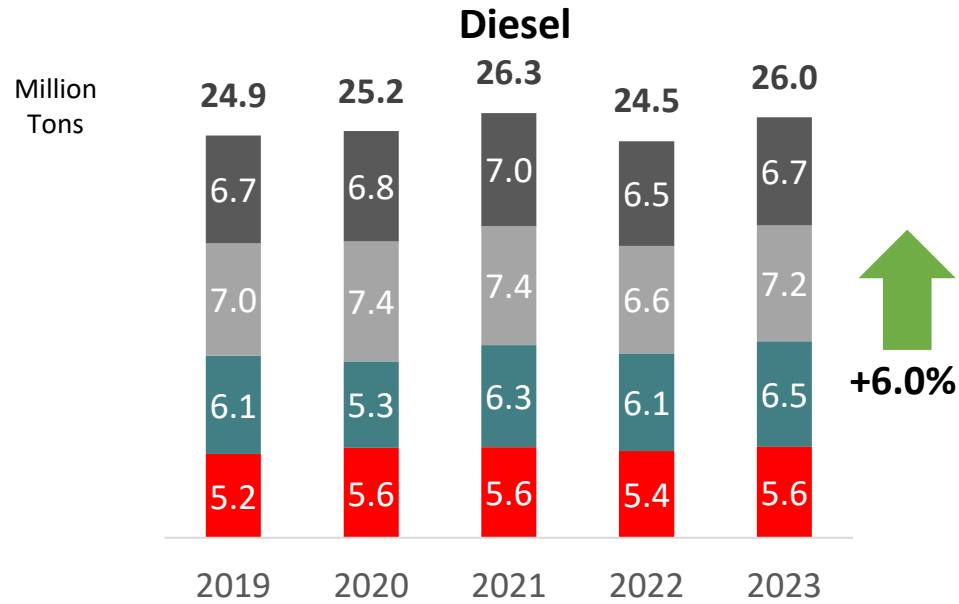
# Turkish Market, 1M 2024



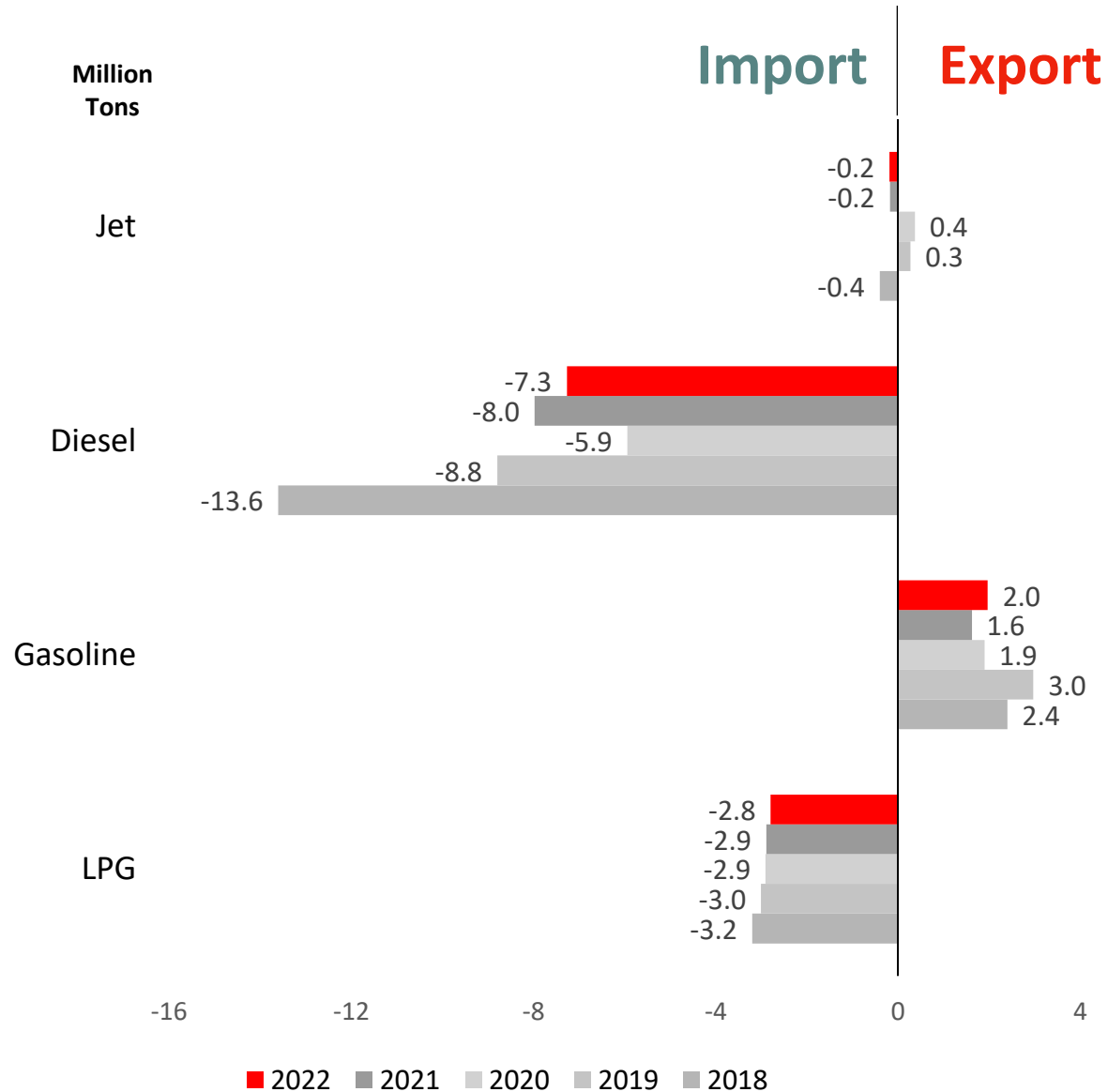
<sup>1</sup>Transit flight consumption included

# Turkish Market, 12M 2023

Q1 Q2 Q3 Q4

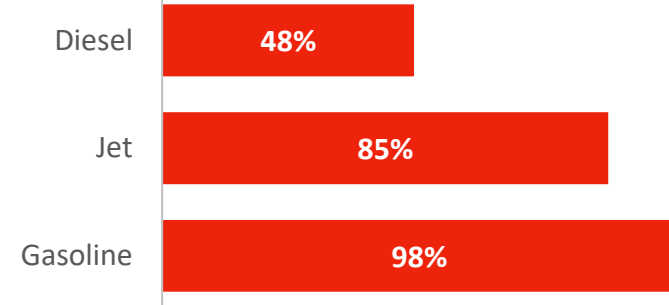


# Turkey's Net Import / Export Balance

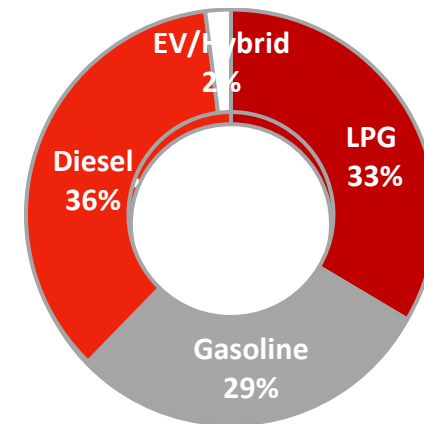


## Market Share of Tüpraş

2022 12M



## Fuel Choice of Passenger Cars 2023

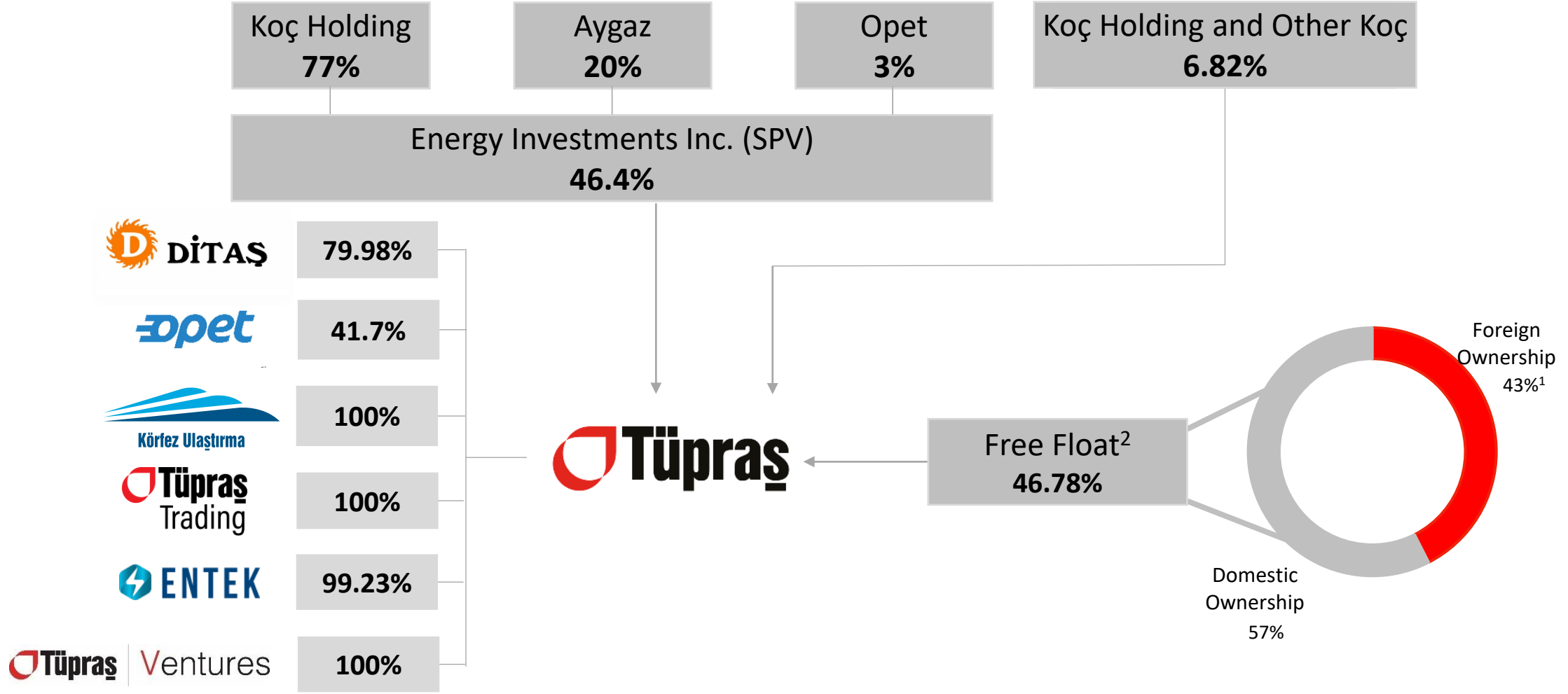




# Company Overview

# Tüpraş Shareholder Structure

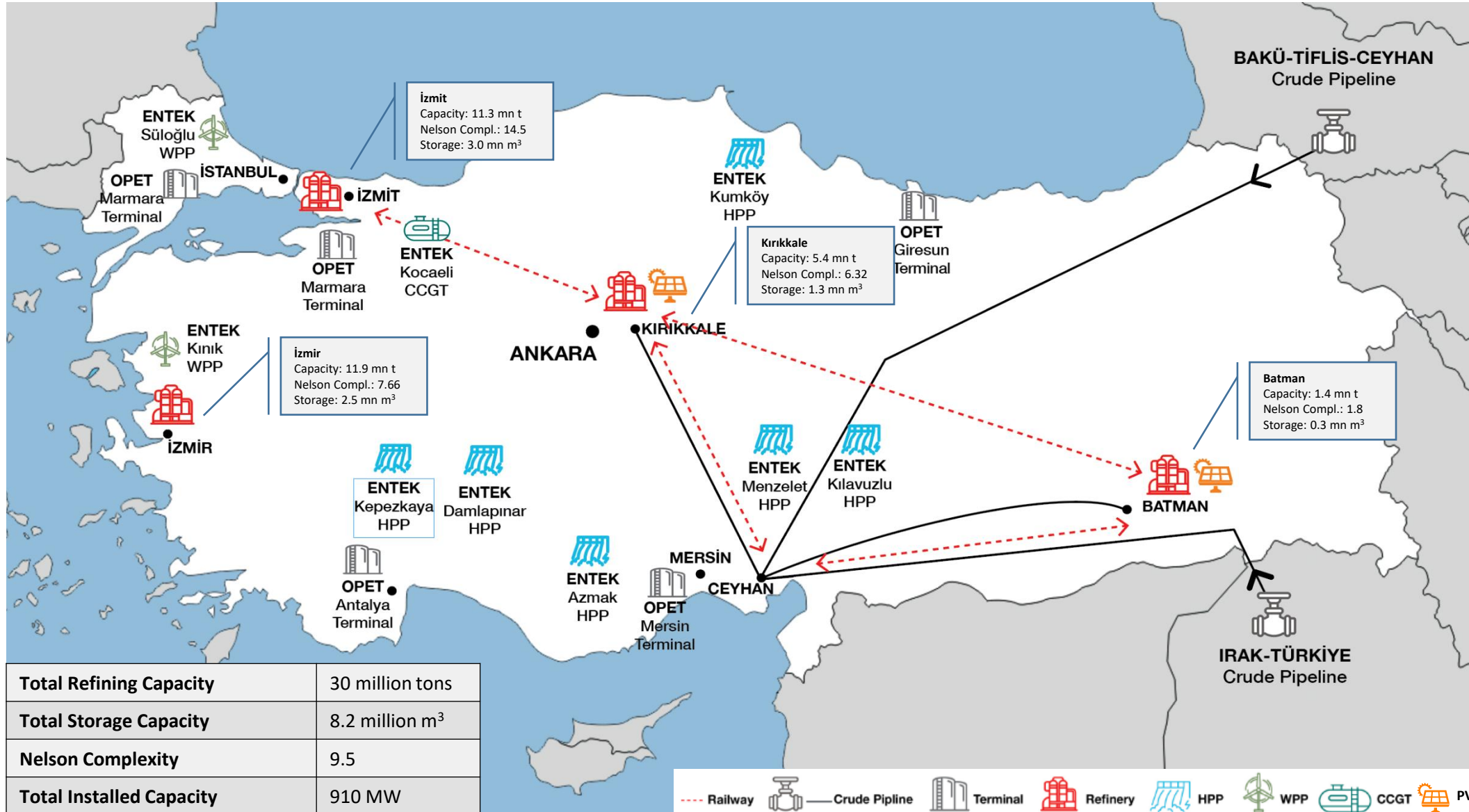
Tüpraş is Turkey's biggest industrial company and leading refiner.



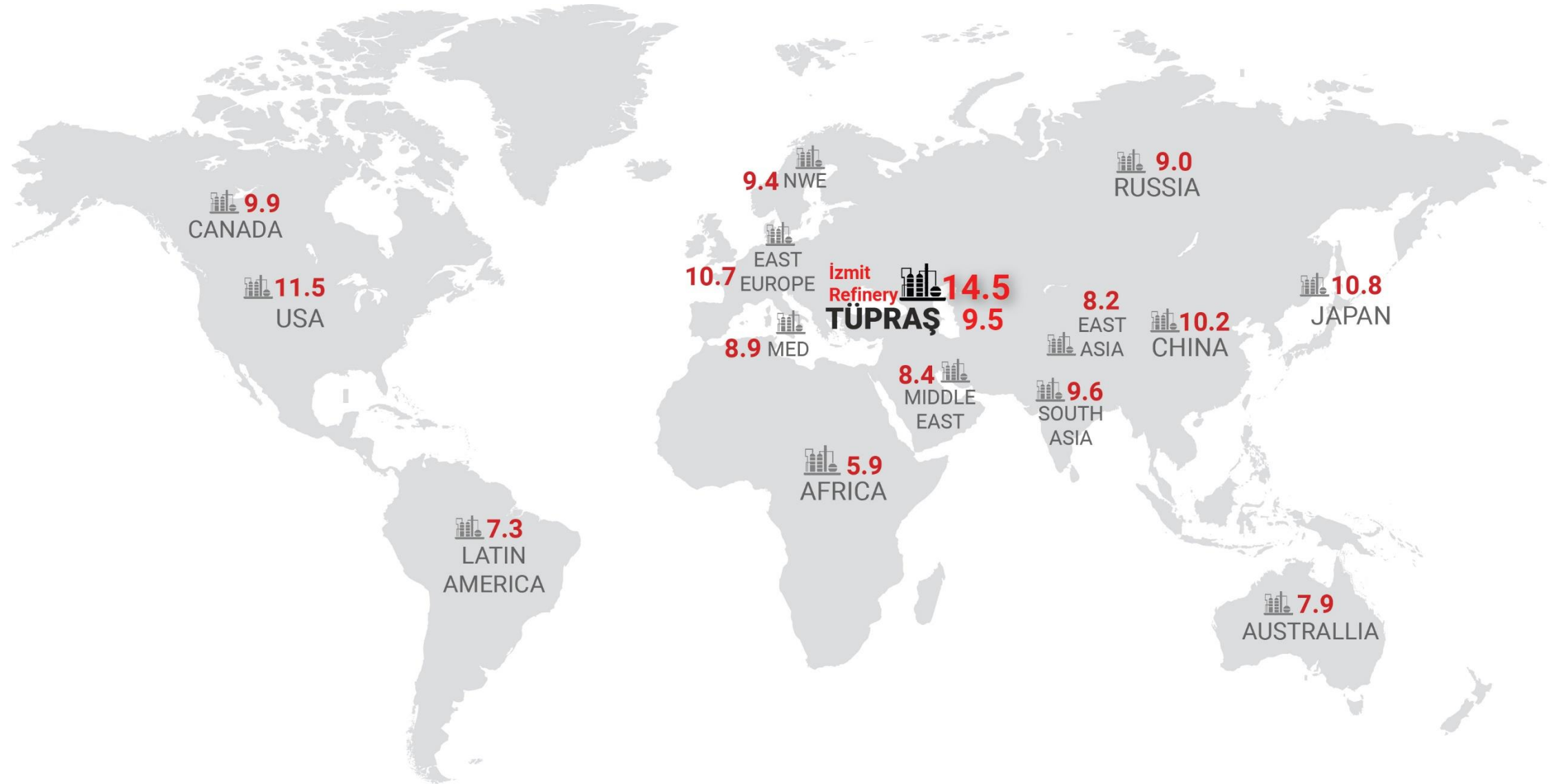
<sup>1</sup> As of December 31, 2023

<sup>2</sup> Includes %1.11 shares of Liquid Petroleum Co.

# Tüpraş' Refining Assets & Distribution Network



# Nelson Complexity of Refining Companies



## OPET - Distribution



**Tüpraş Share: 41.7%**

- 1,866 stations as of 31 December 2023.
- As of December 2023 Market share: 19.0% in white products; 28.4% in black products

## Tüpraş Trading UK - Trading



**Tüpraş Share: 100%**

- Over 8 million tons of product trade**
- More than 10 million tons of spot crude oil connections**
- Trading Office in London is important for wider integration with the global energy landscape by allowing to:
  - Closely monitor international market opportunities
  - Support import and export operations
  - Create additional value from supply chain and sales activities

## DİTAŞ - Marine Transport



**Tüpraş Share: 79.98%**

- 4 Crude Oil Tanker: 470,067 DWT
- 8 Product Tanker: 130,437 DWT
- 4 Bitumen Tanker: 61,450 DWT

## Körfez Ulaştırma - Railway Transport



**Tüpraş Share: 100%**

- ~5% share in Turkish rail freight market
- ~2.5 mn ton of product and semi-product carried in 2023
- Operates with 12 locomotives (7 of them are hybrid) and 519 cistern wagons

## Entek Electricity



### Tüpraş's Share : %99.23

- Entek's installed power: 492 MW
  - 2 WPP with 116 MW capacity , 1 CCGT with 112 MW capacity, 8 Hydro Power Plants with total capacity of 264 MW.
- Entek's sales from production was 1.3 GWh
- EBITDA figure was TL 1.6 bn

## Tüpraş Ventures

### Tüpraş's Share: %100

- Aiming to establish strategic partnerships in new growth areas for energy transformation.
- In 2023, 18 investments were undertaken through Emerald Industrial Innovation Fund.

**Tüpraş** | Ventures

emerald  
Technology Ventures



KOC GROUP COMPANIES'  
FIRST PRIVATE VENTURE  
CAPITAL INVESTMENT FUND



Energy  
Transformation



Sustainability

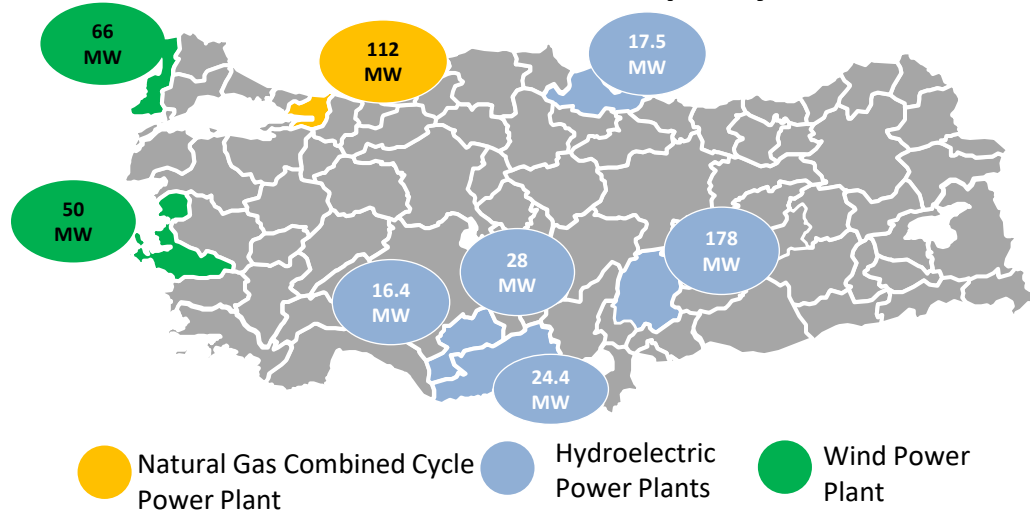


Operational  
Excellence

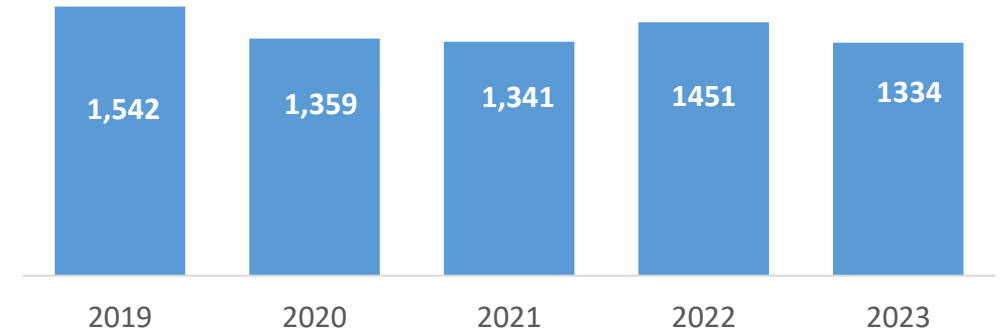
# Tüpraş Subsidiaries

## Entek - Electricity (Tüpraş Share: 99.23%)

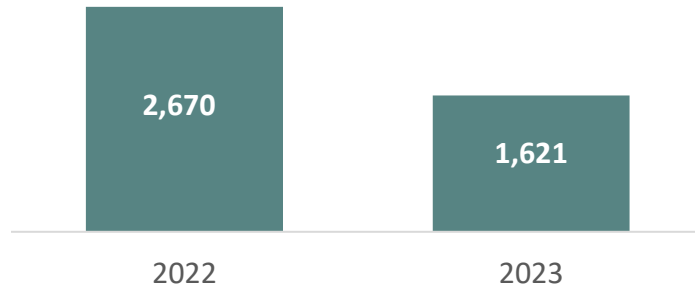
### Entek's Installed Capacity



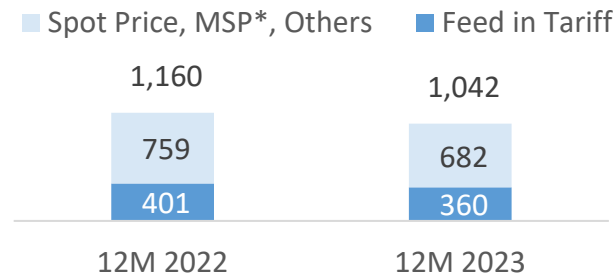
### Production (000 MWh)



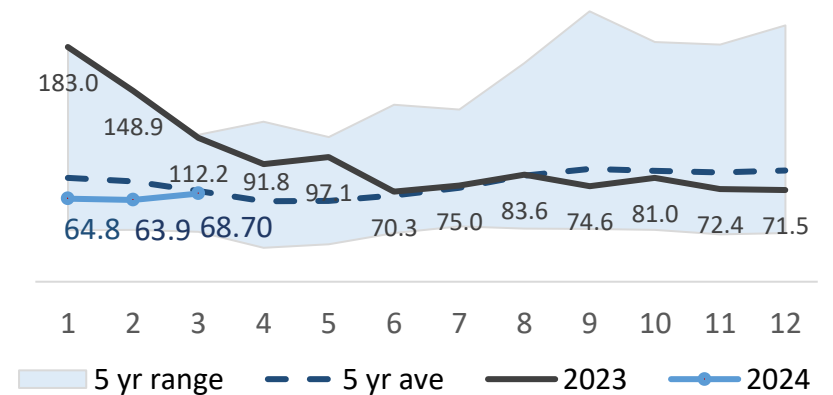
### EBITDA (million TL)



### Total ZCE Sales from Production (GWh)



### Spot Price (\$/Mwh)

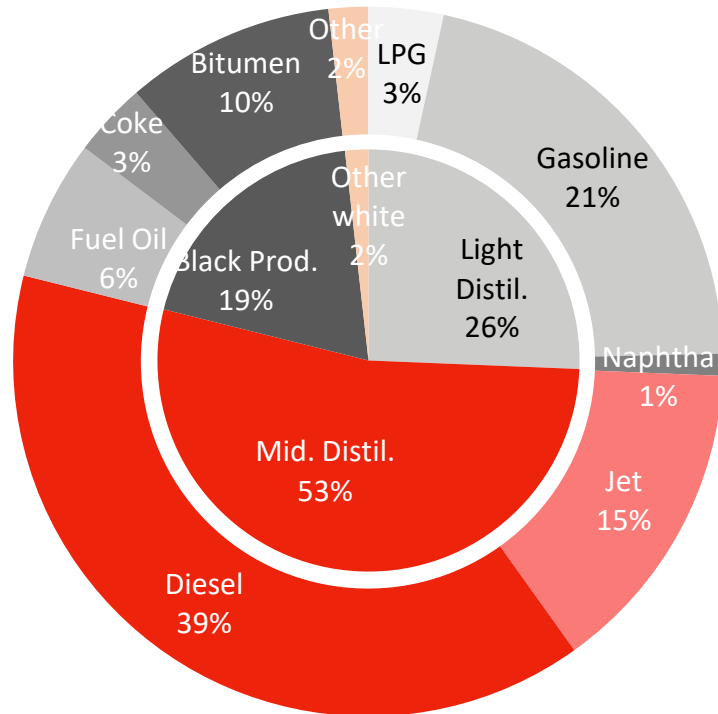




Operations

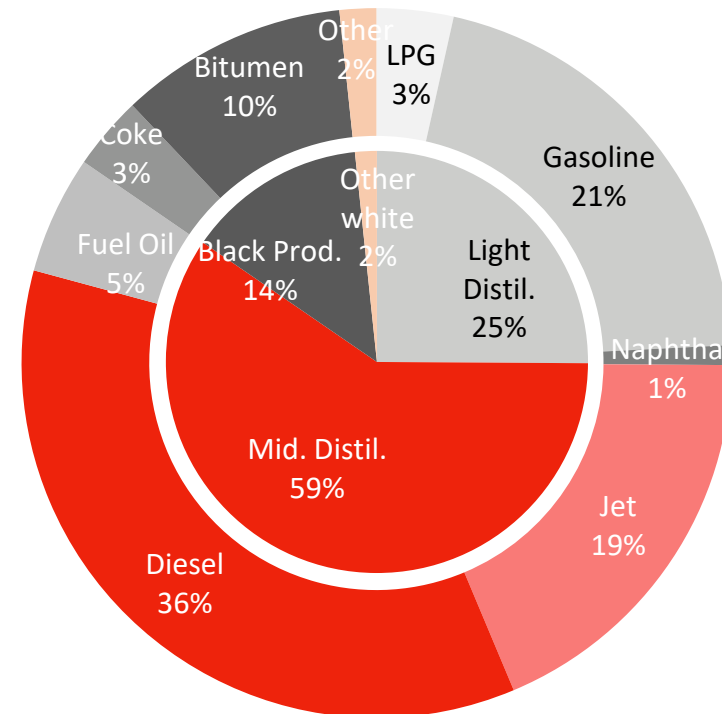
# Annual Product Yields

12M 2022



White Product Yield (%)	80.0%
Production	26.0 mn tons
API	31.1

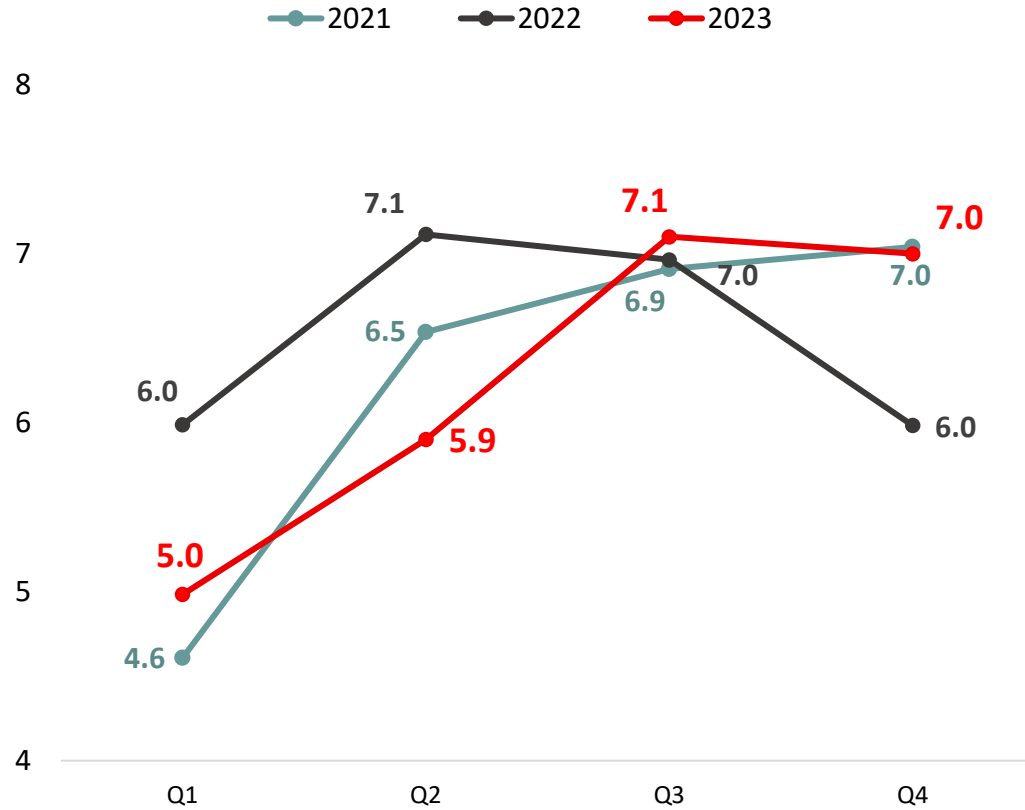
12M 2023



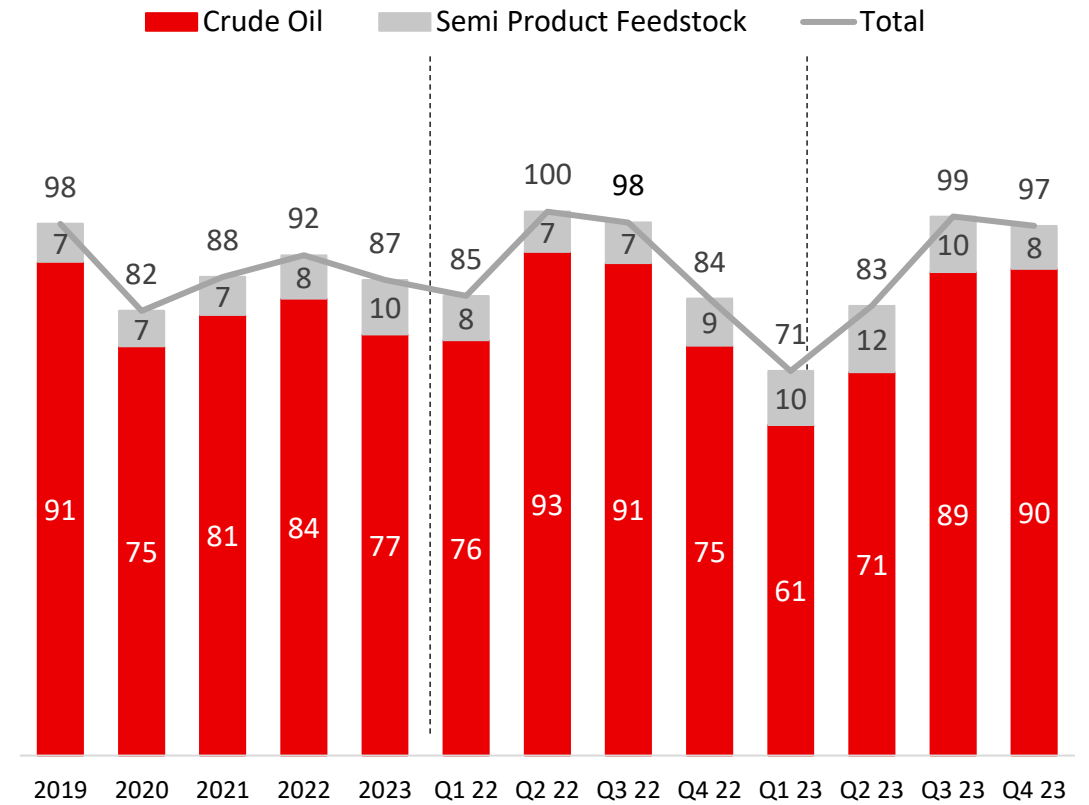
White Product Yield (%)	79.6%
Production	24.9 mn tons
API	31.1

# Capacity Utilization and Quarterly Production Volume

## Quarterly Production (Million Tons)



## Capacity Utilization (%)

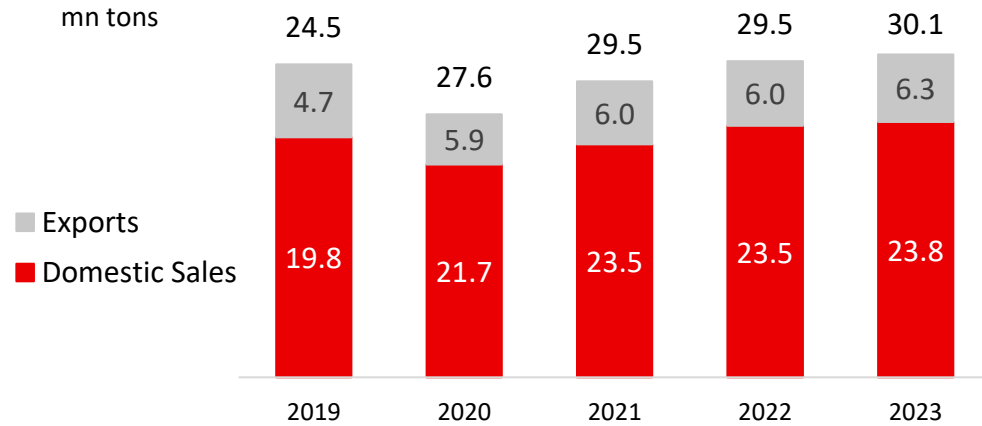


\*Capacity utilization calculation is based on 30 mn tons for Q1 2019 and onwards.

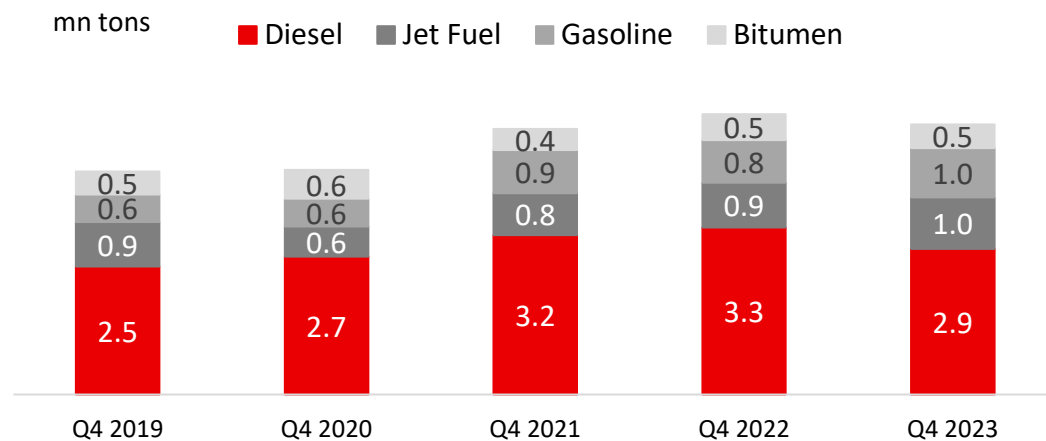
# Sales

- Tüpraş generated 30.1 million tons of total sales in 2023.

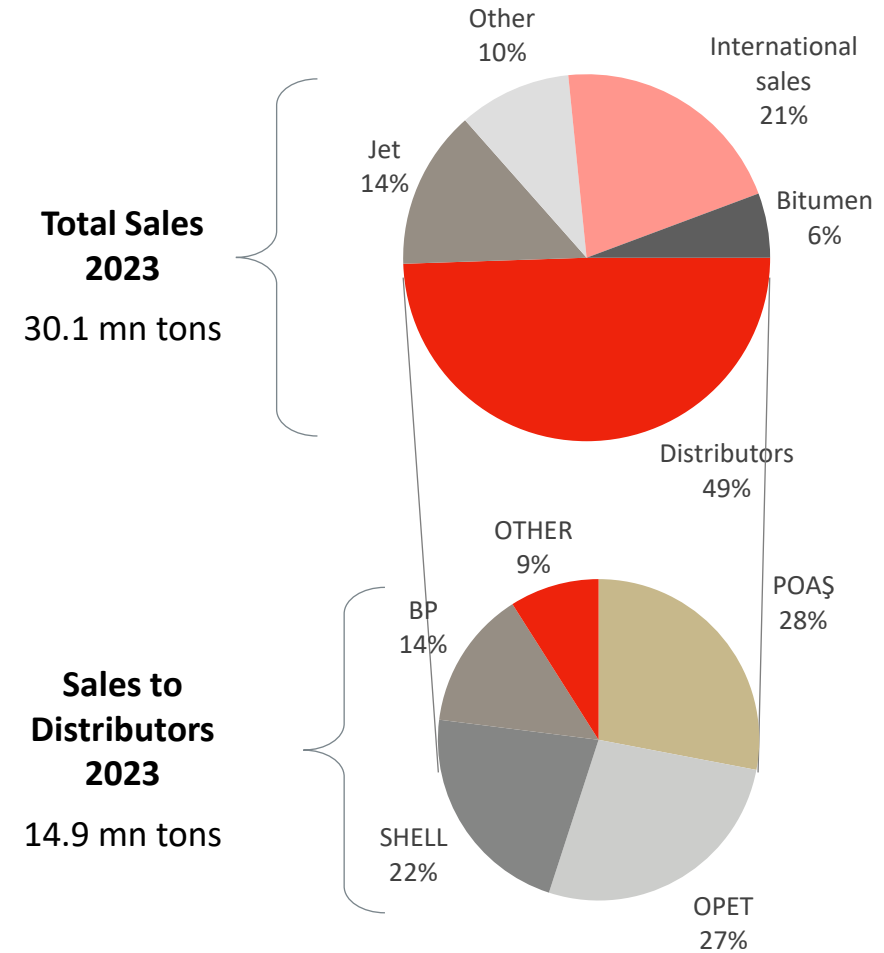
### Total Sales



### Domestic Sales of Key Products

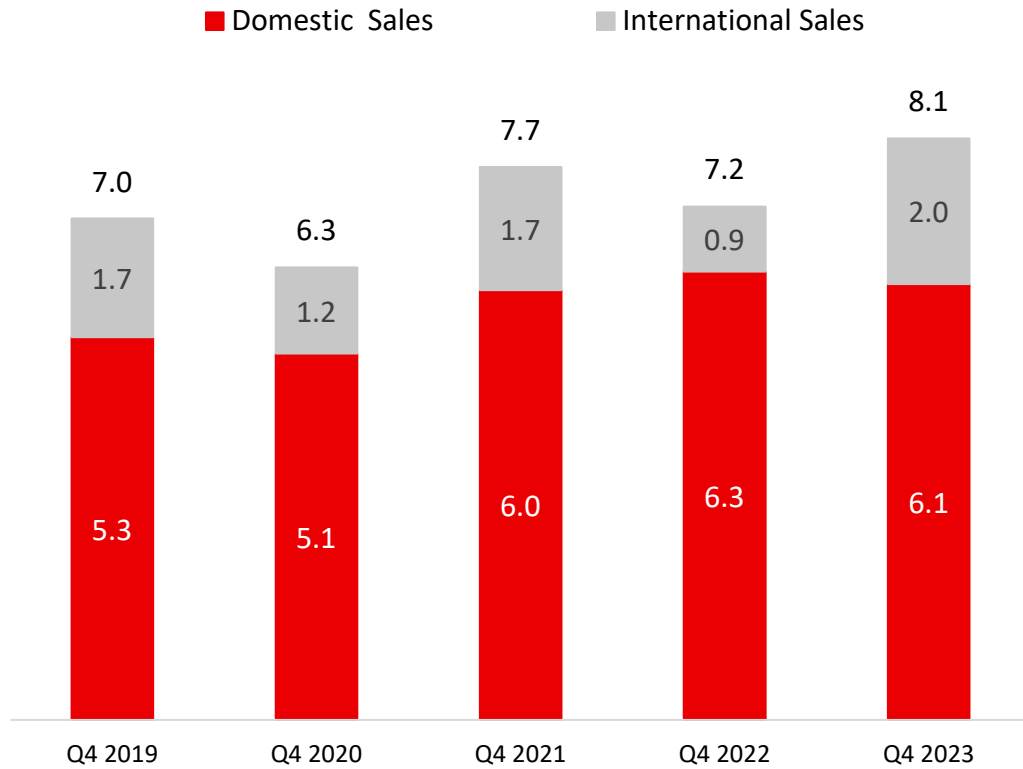


### Customer Groups 2023

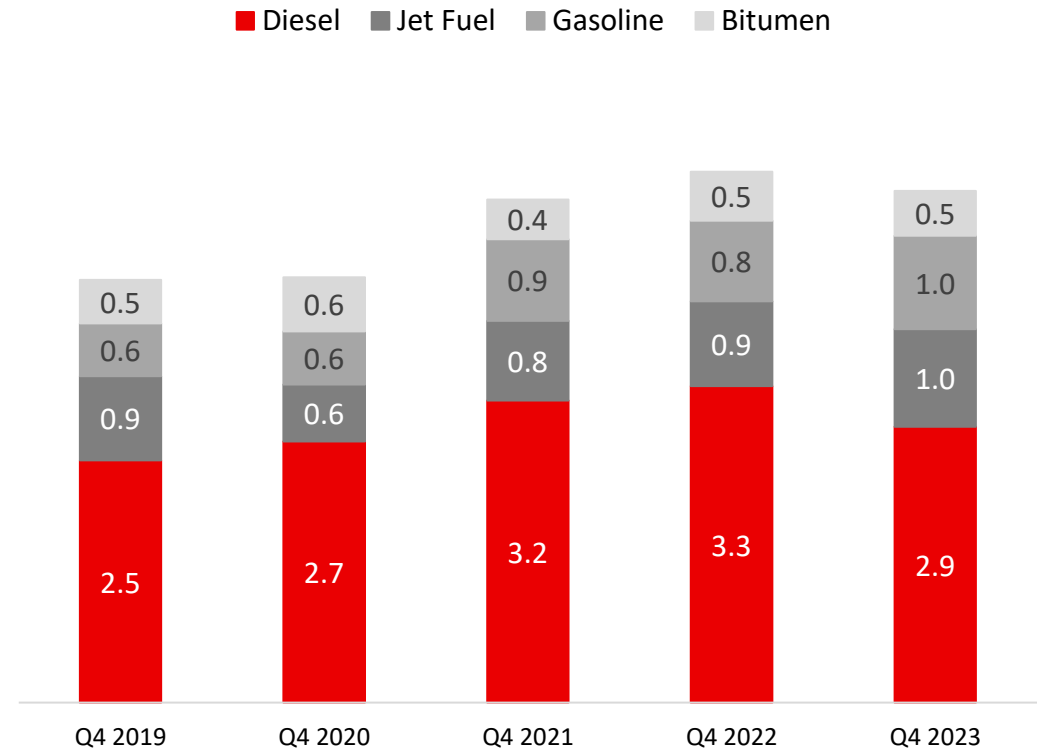


# Quarterly Product Sales (Million Tons)

## Total Product Sales



## Domestic Sales of Selected Products





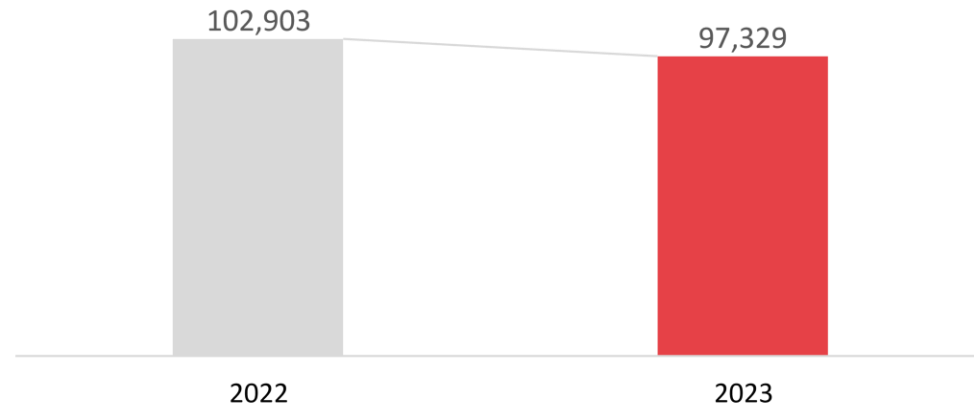
Financials

# Income Statement – IAS 29 Applied (Million TL)

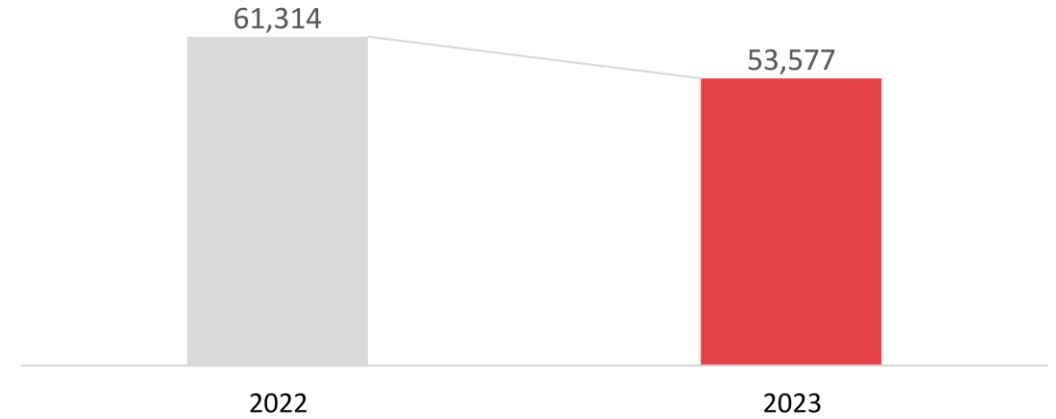
Million TL	2023	2022	%
Net Sales	686,529	916,751	-25%
COGS	-576,796	-803,671	-28%
<b>Gross Profit</b>	<b>109,732</b>	<b>113,080</b>	<b>-3%</b>
Operating Expenses	-19,556	-16,159	21%
Income/Loss from other operations	-16,549	-20,668	-20%
<b>Operating Profit</b>	<b>73,628</b>	<b>76,253</b>	<b>-3%</b>
Inc./Loss from investments	82	-7,548	-
Inc./Loss from Equity pick ups	1,051	-16	-
<b>Operating Profit Before Fin. Income/Loss</b>	<b>74,761</b>	<b>68,689</b>	<b>9%</b>
Financial Income /Expense	-5,194	-13,461	-61%
Monetary Gain/Loss	-11,747	13,280	-188%
<b>Profit Before Tax</b>	<b>57,820</b>	<b>68,508</b>	<b>-16%</b>
<b>Net Profit (excluding minority interest)</b>	<b>53,577</b>	<b>61,314</b>	<b>-13%</b>
<b>EBITDA*</b>	<b>97,329</b>	<b>102,903</b>	<b>-5%</b>
Inventory Gain/Loss	14,804	9,529	55%
<b>EBITDA* CCS</b>	<b>82,525</b>	<b>93,374</b>	<b>-12%</b>

# Financial Highlights

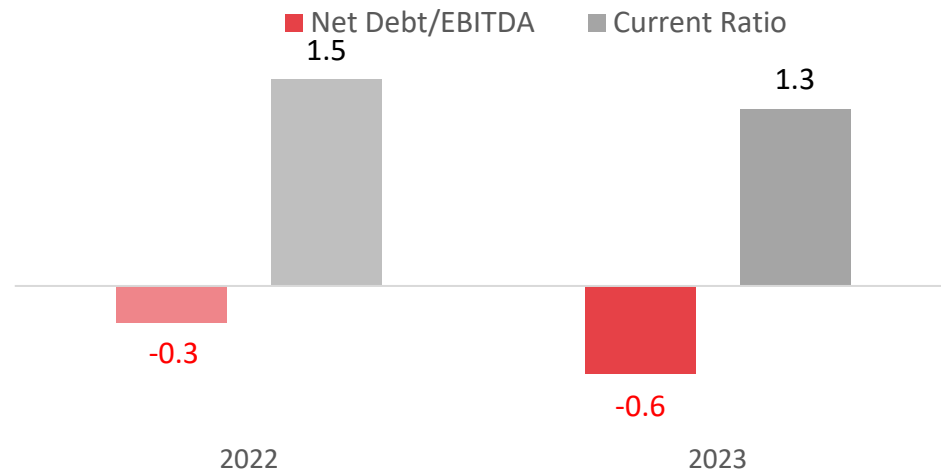
## EBITDA (mn TL)



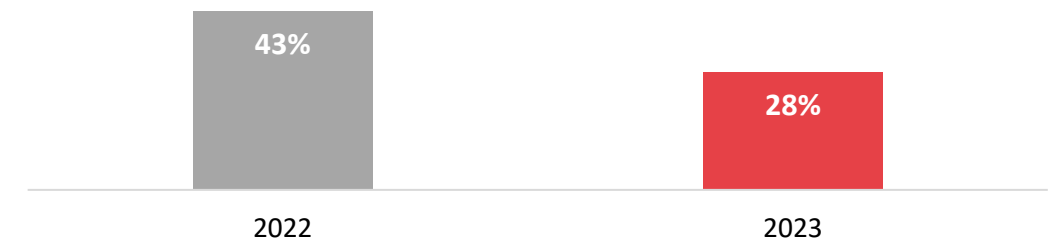
## Net Income\* (mn TL)



## Current Ratio & Net Debt / EBITDA



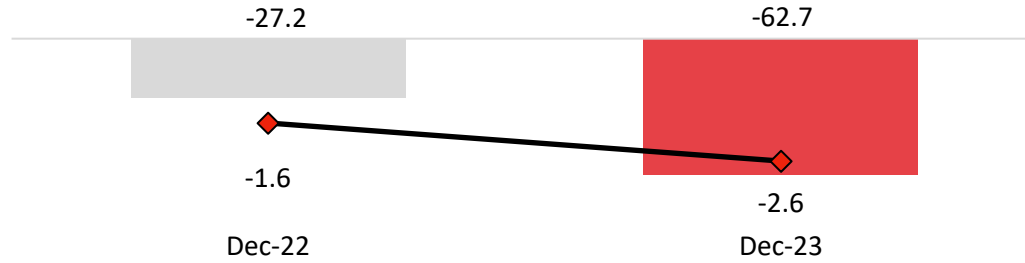
## Net Return on Average Equity (%)



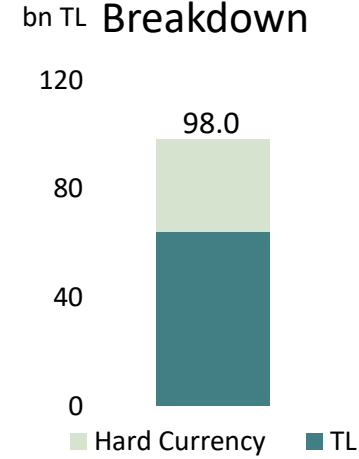
# Balance Sheet Analysis

## Net Debt (Cash)

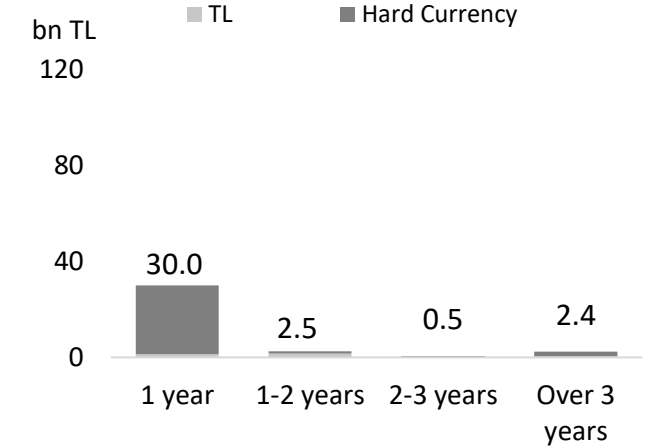
■ In Billion TL    ◆ In Billion \$



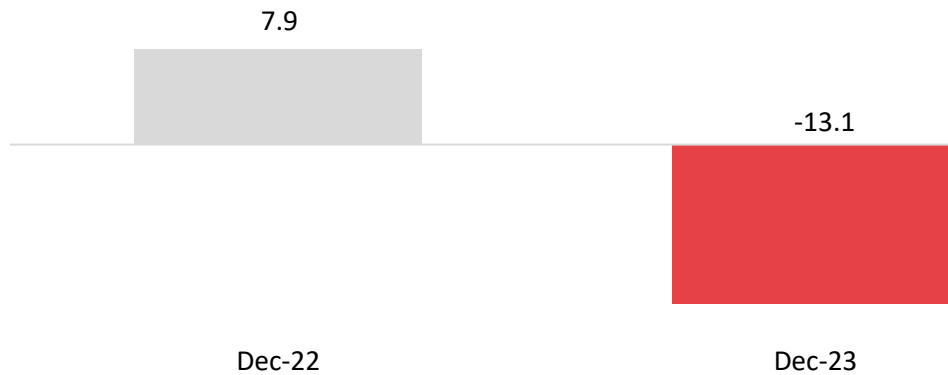
## Cash Currency Breakdown



## Redemption Schedule



## Working Capital Requirement (Billion TL)



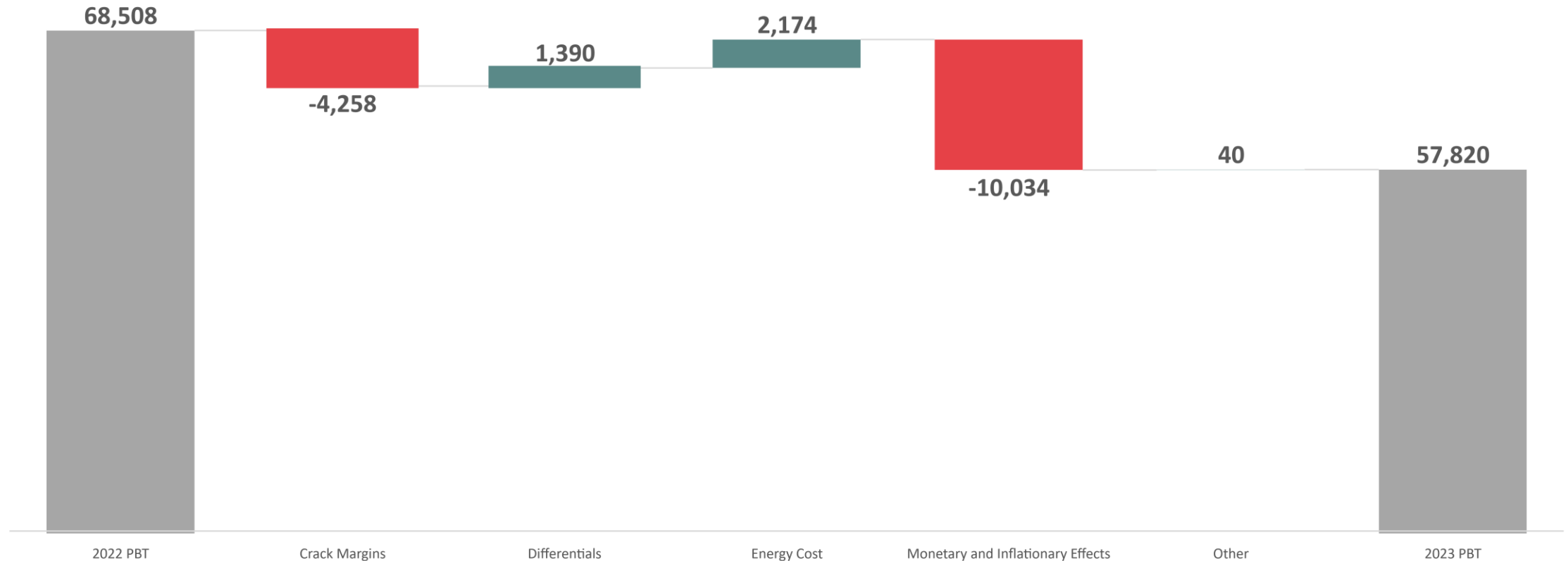
## Financial Management

- Working Capital Requirement remains negative with less volatility in prices and better inventory turnover
- Net cash position continued with strong operating cashflow.

# Profit Before Tax Bridge (2022 – 2023)

Lower energy costs and wider differentials were not able to compensate monetary and inflationary adjustments and weakness in crack margins. As a result, 2023 PBT ended lower than 2022 PBT.

Million TL



# 2024 Expectations

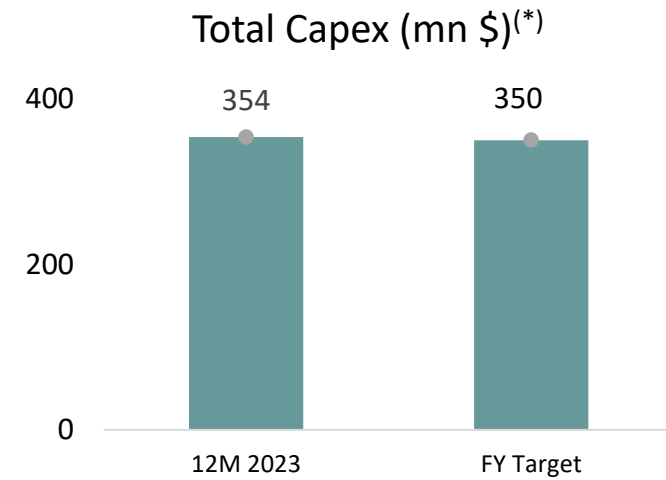
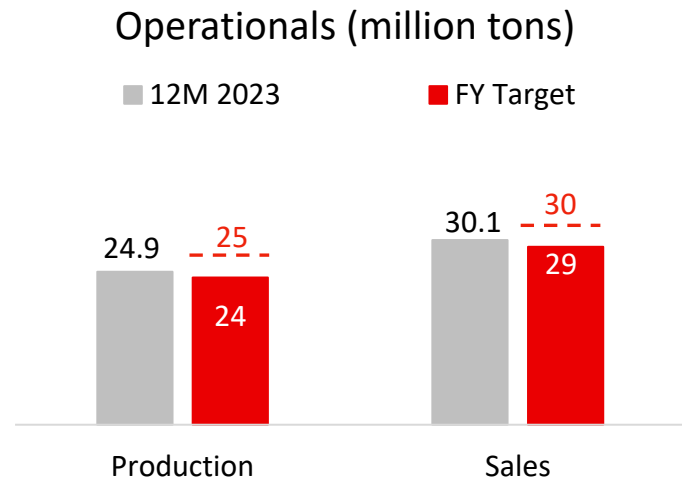
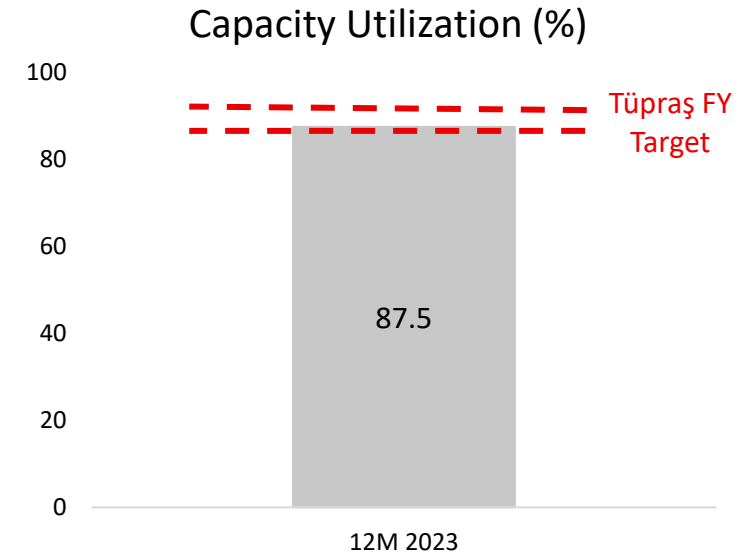
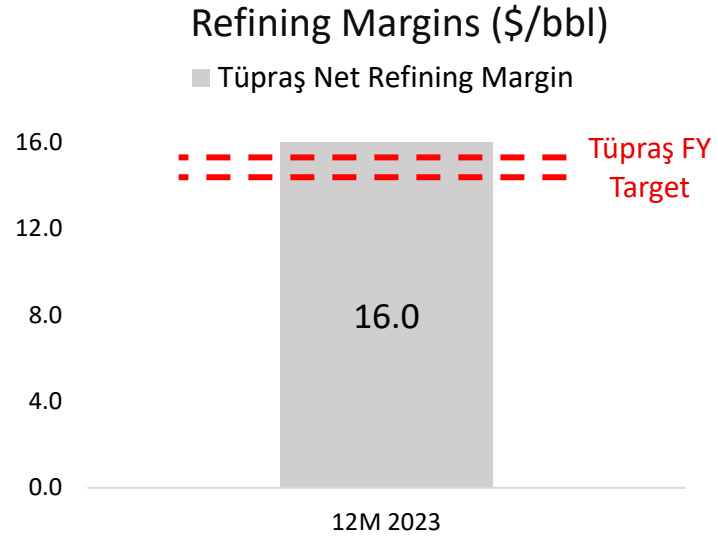
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**Tüpraş Crack Margin expectation ~14 \$/bbl**

- ~26 mn tons annual production, ~30 mn tons annual sales and 85-90% average capacity utilization

**Consolidated Capex ~500 million \$**

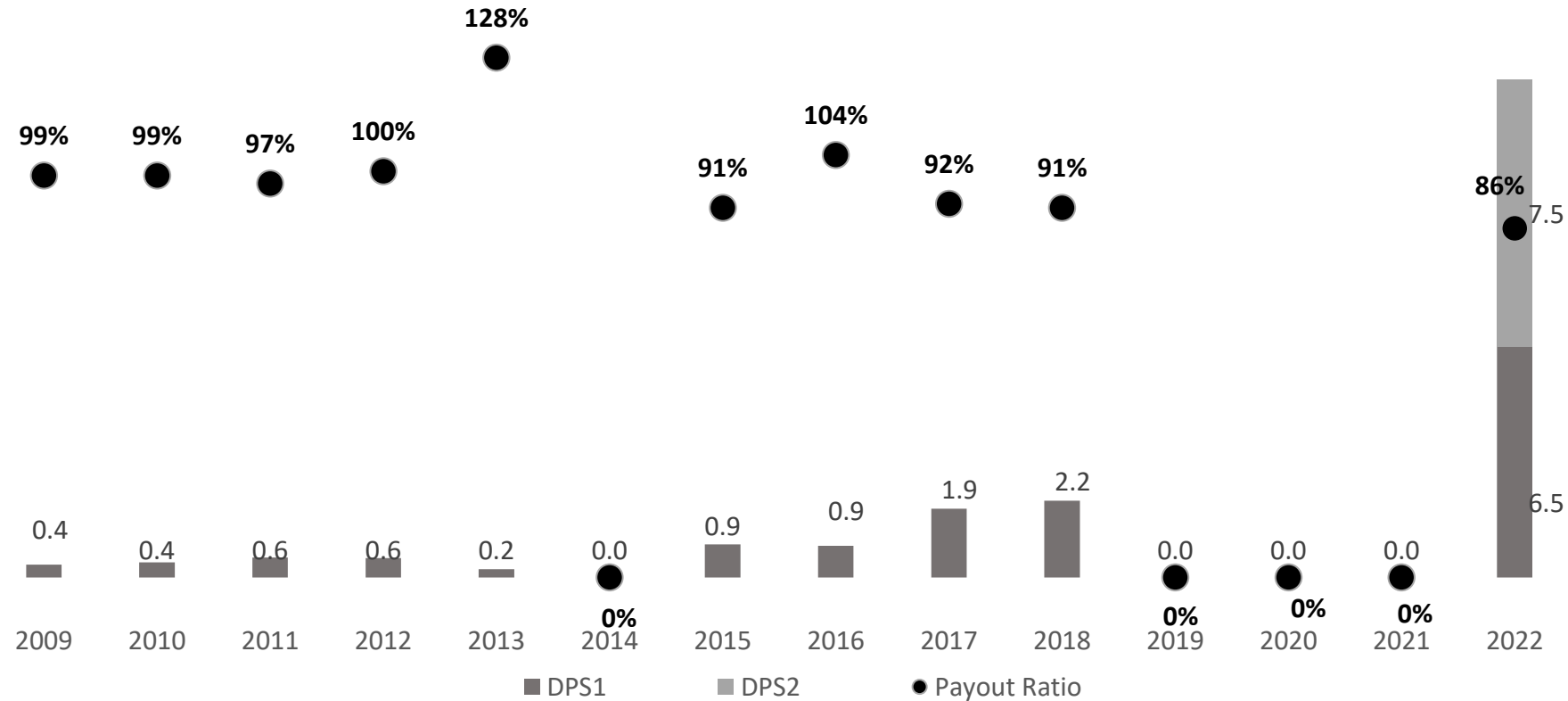
# 2023 Results



# Tüpraş Balance Sheet (Million TL)

	31.12.2023	31.12.2022*	Diff.	Diff. (%)
<b>Current Assets</b>	<b>201,149</b>	<b>197,510</b>	<b>3,639</b>	<b>2</b>
Cash & C. Equivalents	98,024	82,008	16,016	20
Trade Receivables	40,439	35,290	5,149	15
Derivatives	2,064	5,927	-3,863	-65
Inventories	44,464	59,453	-14,989	-25
Pre-paid expenses	1,278	1,433	-155	-11
Other Current Assets	14,880	13,399	1,481	11
<b>Long Term Assets</b>	<b>165,644</b>	<b>150,191</b>	<b>15,454</b>	<b>10</b>
Financial Assets & Subsidiaries	8,643	7,701	942	12
Tangible & Intangible Fixed Assets	138,787	132,068	6,719	5
Derivatives	37	94	-57	-61
Pre-paid expenses	1,815	1,119	695	62
Deferred Tax	6,466	706	5,760	815
Other Longterm Assets	9,896	8,502	1,395	16
<b>Total Assets</b>	<b>366,794</b>	<b>347,700</b>	<b>19,093</b>	<b>5</b>
<b>Short Term Liabilities</b>	<b>155,271</b>	<b>130,004</b>	<b>25,267</b>	<b>19</b>
Financial Loans	29,968	19,764	10,204	52
Trade Payables	97,956	86,839	11,117	13
Derivatives	533	1,639	-1,106	-67
Provisions	1,226	874	352	40
Other ST Liabilities	25,588	20,888	4,699	22
<b>Long Term Liabilities</b>	<b>8,582</b>	<b>38,284</b>	<b>-29,702</b>	<b>-78</b>
Financial Loans	5,358	35,055	-29,696	-85
Payables & Provisions	2,074	1,961	113	6
Derivatives	469	491	-22	-4
Other LT Liabilities	681	777	-97	-12
<b>Total equity attributable to equity holders of the parent</b>	<b>200,763</b>	<b>177,884</b>	<b>22,879</b>	<b>13</b>
<b>Minority Interests</b>	<b>2,178</b>	<b>1,528</b>	<b>649</b>	<b>42</b>
<b>Total Liabilities &amp; Equity</b>	<b>366,794</b>	<b>347,700</b>	<b>19,093</b>	<b>5</b>

# Dividend (TL)



## Strategic Transition Dividend Plan

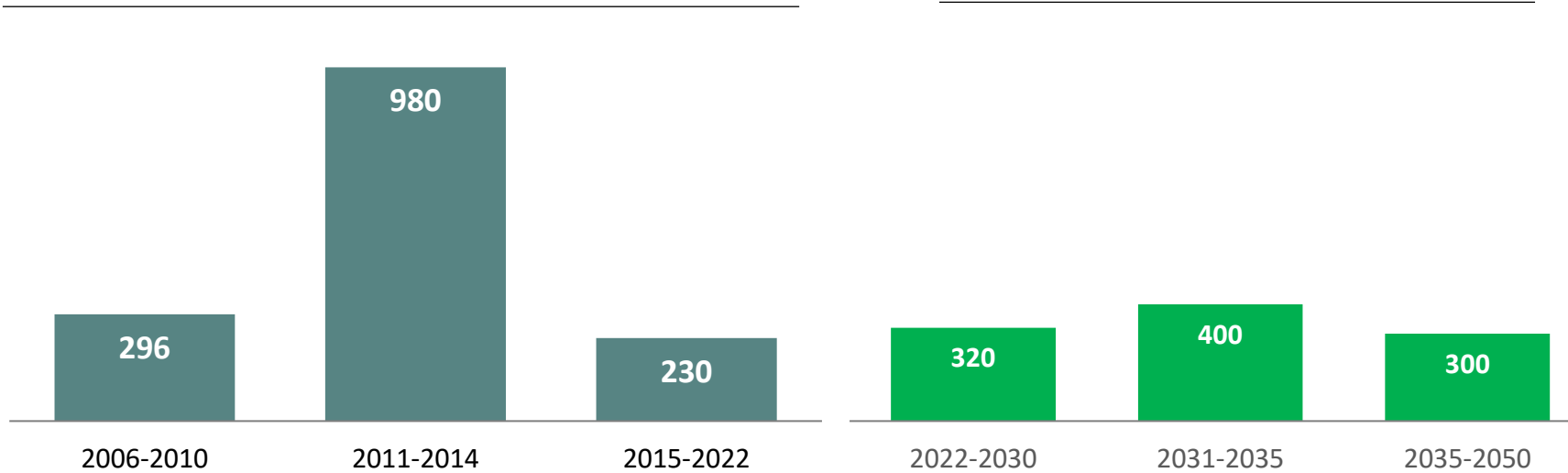
Our new business model enables us to pay ~80% average dividends and we will remain as a high dividend payer

\*2009-2022 dividend payout ratio, which is calculated according to distributable net income based on statutory accounts

# Investments (Million \$)


Avg. 460 Mn\$

Avg. 350 Mn\$



## CURRENT PROJECTS

- FCC Modernization in İzmir
- New Sulphur Recovery Unit in Kırıkkale
- Solar Power Plant in Kırıkkale
- Firefighting System Modernization in Kırıkkale
- Wind Power Plant in İzmir

**7+**   
After privatization  
Billion \$ investment

~50%  
of total capex  
ESG related  
investments in  
2022



# Financial Policy

**Financial Discipline:** Risk management policies focusing on areas such as leverage, liquidity, counterparty risk, commodity, interest rate and currency exposure.

## Leverage & Liquidity

### Liquidity risk management & targets/limits for financial ratios:

- Net financial debt/EBITDA
- Net financial debt/Equity
- Current ratio
- Share of long-term debt

## Counterparty Risk Policy

Deposit is kept within bank-based limits:

- Credit rating assessment and strong capital base.
- Cap on the maximum deposit allocated to a single bank.
- Cap for deposits subject to banks shareholders' equity

## Interest Rate & Fx

- The fixed/floating profile of financial debt.
- Management of FX risk with derivative instruments
- Zero FX exposure target on daily basis.

## Commodity Hedging Policy

### Inventory Hedging Policy:

- Operational hedge: Optimum stock policy & forward pricing mechanism.
- Financial hedge: Cargo based hedging to match the pricing period of purchases with sales.

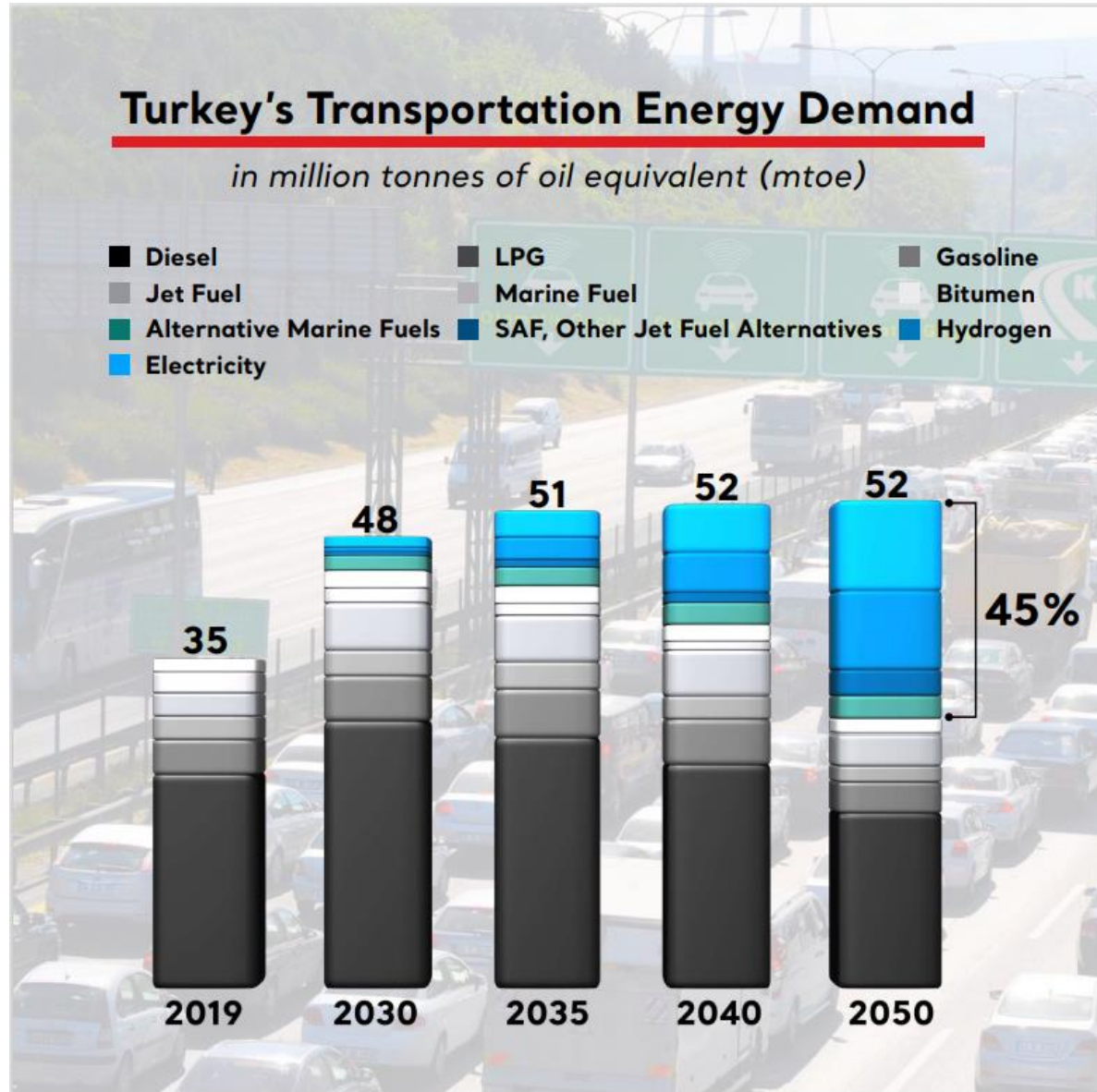
### Crack Margin Hedging Policy:

- Financial hedge: Crack margin (gasoline, diesel, jet fuel, fuel oil) risk mitigation by using derivatives.
- Hedge ratio between %0-%50 with up to 1 year hedge tenor



Strategy

# Turkey's Transportation Energy Demand



## OUR PROJECTIONS



Turkey's fossil fuel consumption to peak in 2030



**Diesel** to be partially replaced by **H<sub>2</sub>**, for commercial vehicles existing domestic refining capacity will still be well positioned



In passenger cars, **EVs** to lead new sales starting early 2030s and become the dominant powertrain before 2040

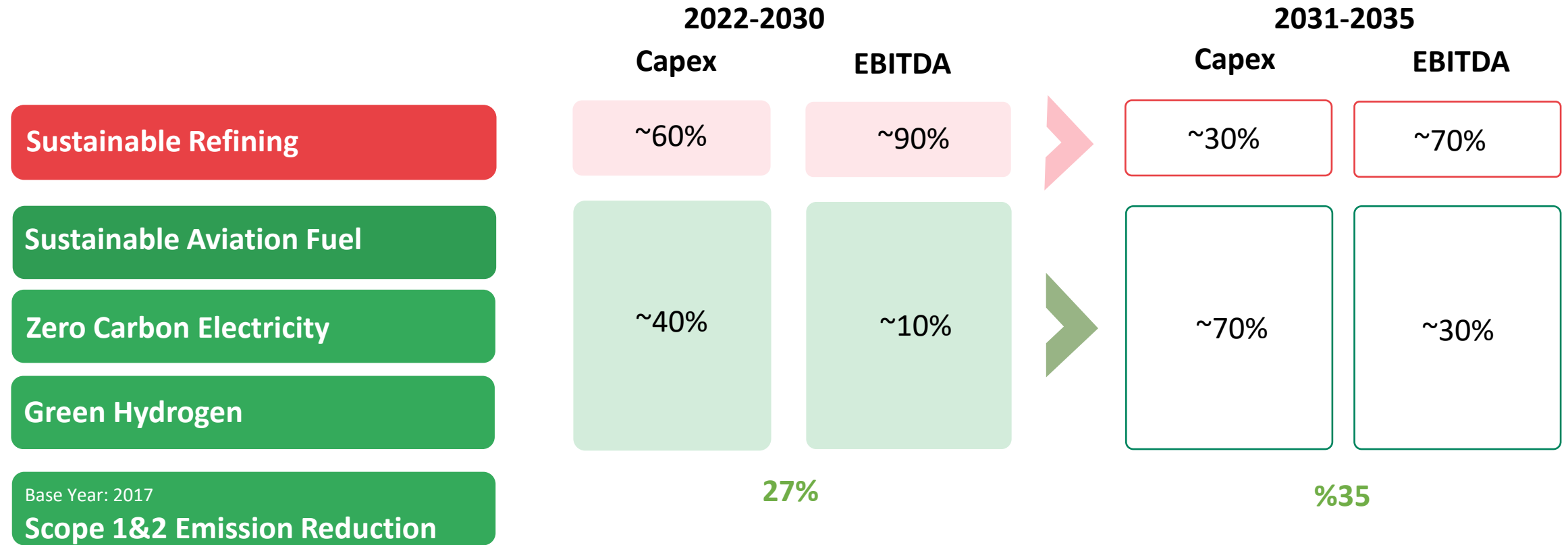


**H<sub>2</sub>** to enter a rapid growth phase from 2030



**Sustainable Aviation Fuel** to cover ~10% of aviation fuel by 2030

# Strategic Transition Plan



## Sustainable & Profitable Tüpraş

2035

Average EBITDA  
**> \$1 Billion / Year**

Average Capex  
**~ \$350 Million /Year**

ROACE  
**> 25%**

Net Debt/  
EBITDA  
**<2.0x**

Average Pay-Out Ratio  
**~ 80%**

# Strategic Transition Plan – Investment Areas



## SUSTAINABLE REFINING

### Energy Efficiency and Decarbonization Projects

- Remain as a **Major EBITDA Contributor**
- **Improve energy efficiency** to drive up profitability
- **Diversify product portfolio** through lighter chemicals
- Within **2022-2035**;
  - **~2.3 bn USD capex, ~13 bn USD Cumulative EBITDA**



## ZERO CARBON ELECTRICITY

### Integrating Zero Carbon Electricity to produce Green H<sub>2</sub>

- Ensure affordable **green H<sub>2</sub> production, capturing electrification demand**
- **Primarily supply zero carbon electricity for H<sub>2</sub> production, remaining portion to be sold**
- Within **2022-2035**;
  - **~1.3 bn USD capex , ~400 MUSD Cumulative EBITDA**



## BIOFUELS

### Becoming the Lead SAF Supplier in Turkey

- Capture changing market for **liquid fuels**, ensure **long term profitability in aviation sector**.
- **Conversion of existing unit** in İzmir to produce **Sustainable Aviation Fuel (SAF)**
- Within **2022-2035**;
  - **~600 MUSD capex, ~1.1 bn USD Cumulative EBITDA**



## GREEN HYDROGEN

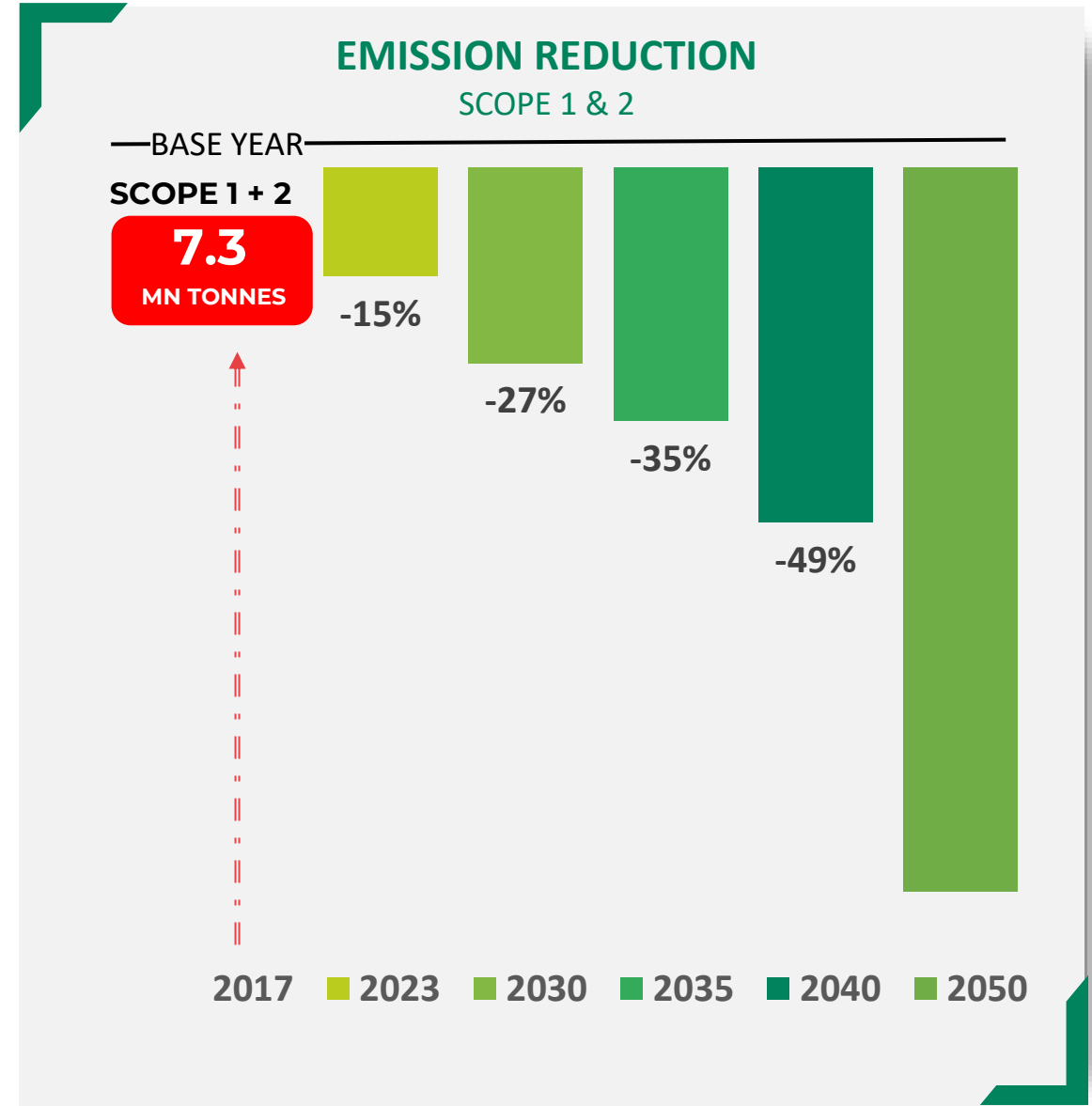
### Reducing Refining Emissions

- Capture changing market for **land transportation, reduce refining emissions**.
- **Reduce Scope 1-2 emissions** of refineries. Followed by **H<sub>2</sub> sales**, starting from 2030.
- Within **2022-2035**;
  - **~690 MUSD capex, ~640 MUSD Cumulative EBITDA**

# Strategic Transition Plan – Emission Reduction



**We will invest in  
energy efficiency & decarbonization  
Projects, green hydrogen & zero carbon  
electricity usage in refining to reduce  
scope 1 & 2 emissions**



# Strategic Transition Plan - Financials

We are  
sustainable  
and  
profitable.

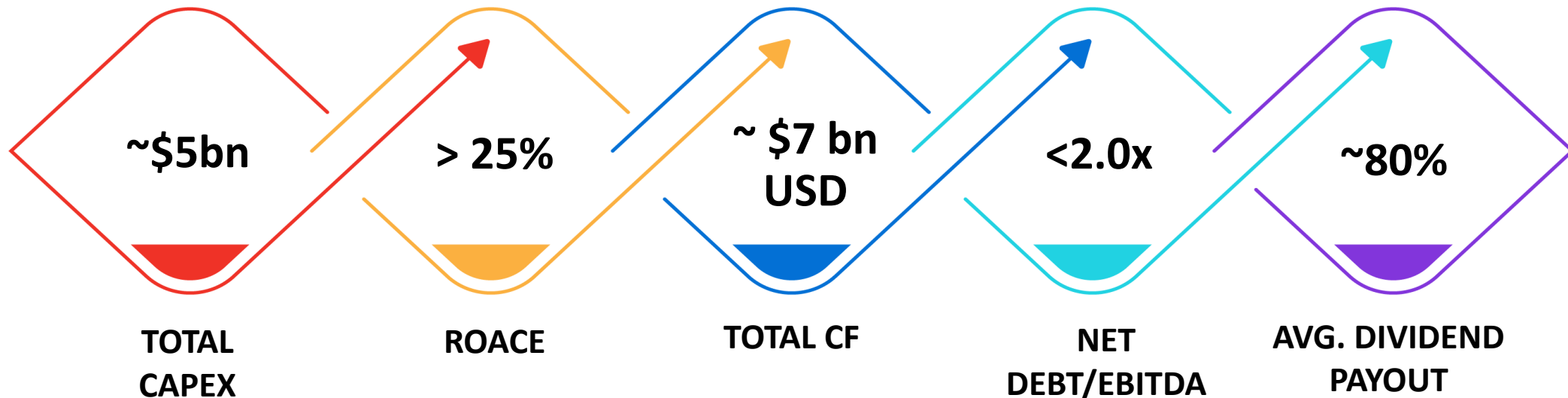
Will **eliminate our scope 1 & 2 emissions by 2050** while executing our plan and achieving these results.

**\$350mn** average CAPEX until 2035, totaling **\$5 bn.**

ROACE will remain above 25% creating **~\$7bn total CF** until 2035

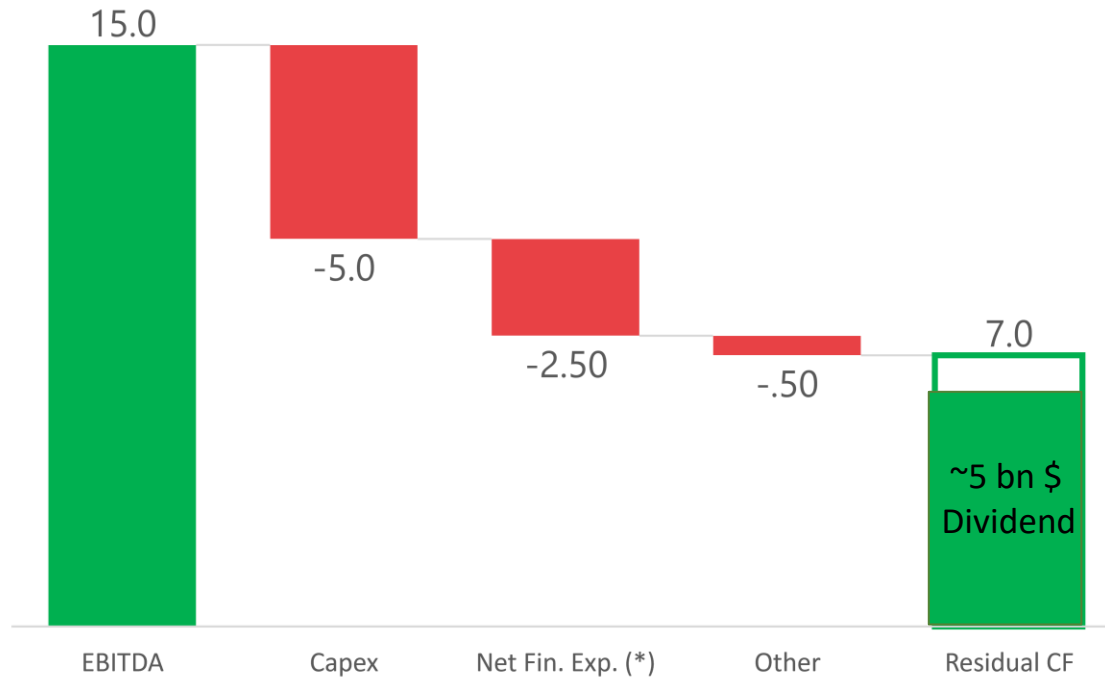
With ample CF, **Net Debt / EBITDA** will be below **<2.0x**

Will remain a **high dividend payer**, average **~80% dividend pay-out**



# Strategic Transition Plan - Financials

Cumulative Cash Flow Bridge (\$ bn)



(\*) Consists of net additional funding and related financial expenses

## Sound Financial Plan

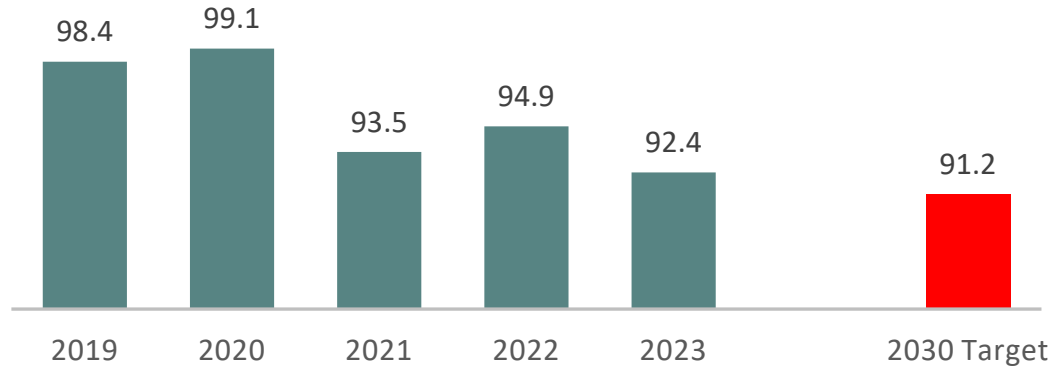
- Superior EBITDA generation and disciplined capex plan leads to very low external funding requirement.
- Strong FCF generation ensures strong dividend potential
- 80% dividend payout on average according to our new business model
- Net Debt / EBITDA will remain below 2x



ESG

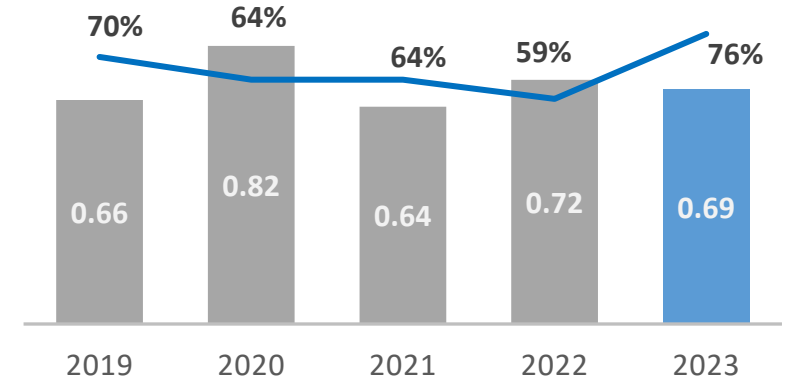
# Tüpraş's Environmental Highlights

### Energy Intensity Achievements

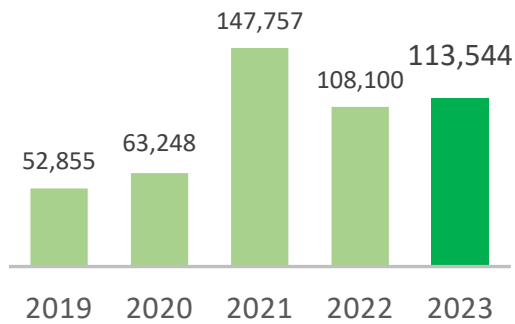


Water Consumption per processed crude oil (m3/ton)

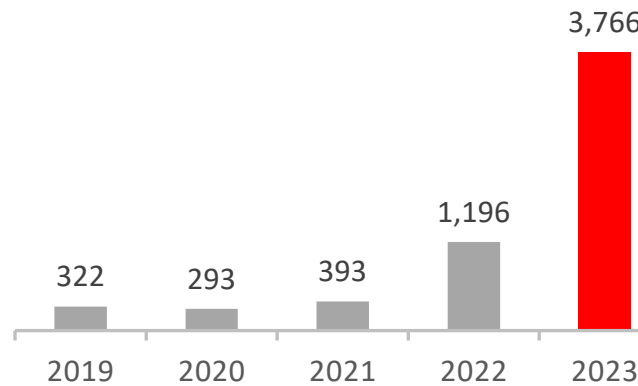
Ratio of recovered water to total water consumption (%)



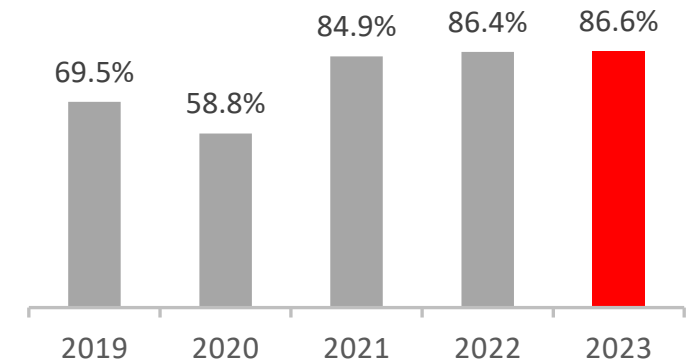
### Levelized Greenhouse Gas Emissions Reductions through Energy Efficiency Projects (tons CO2e)



### Environmental Investment and Operational Expenditures (MTL)



### Waste recycling rate





# Appendix

# 2024 Refinery Maintenance Schedule

## RUP Maintenance

Preparation and planning phase: 2022

Maintenance start: March 1

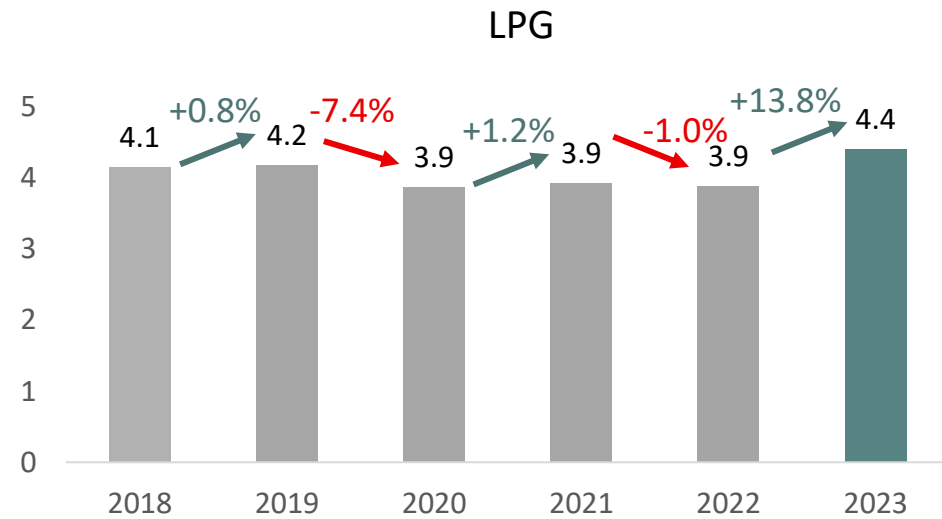
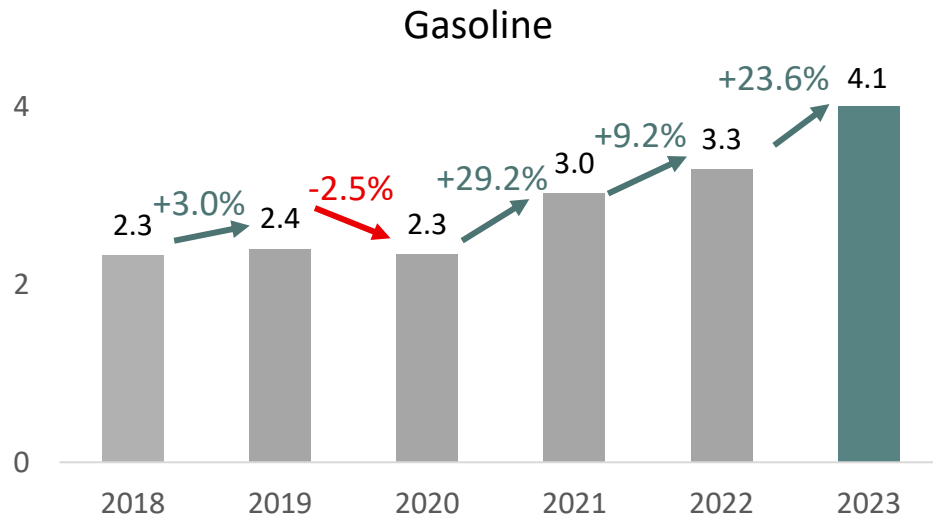
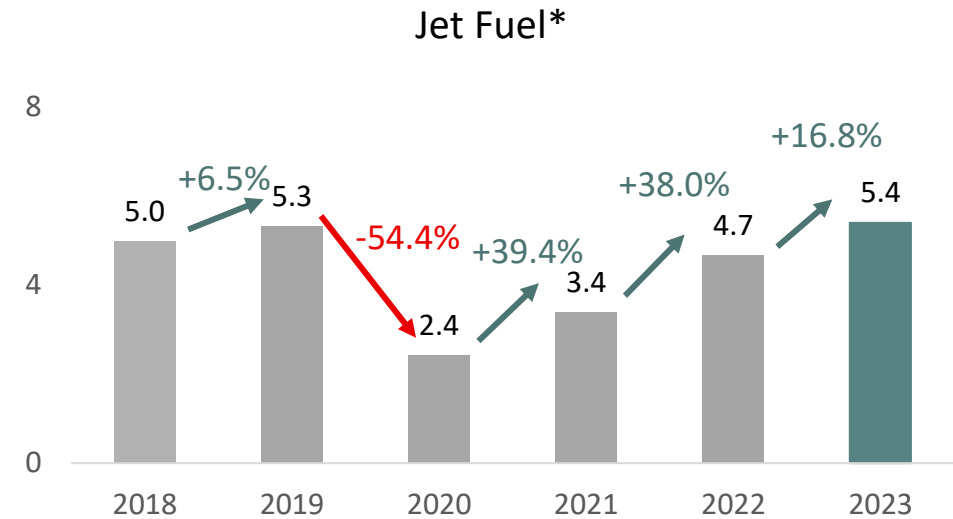
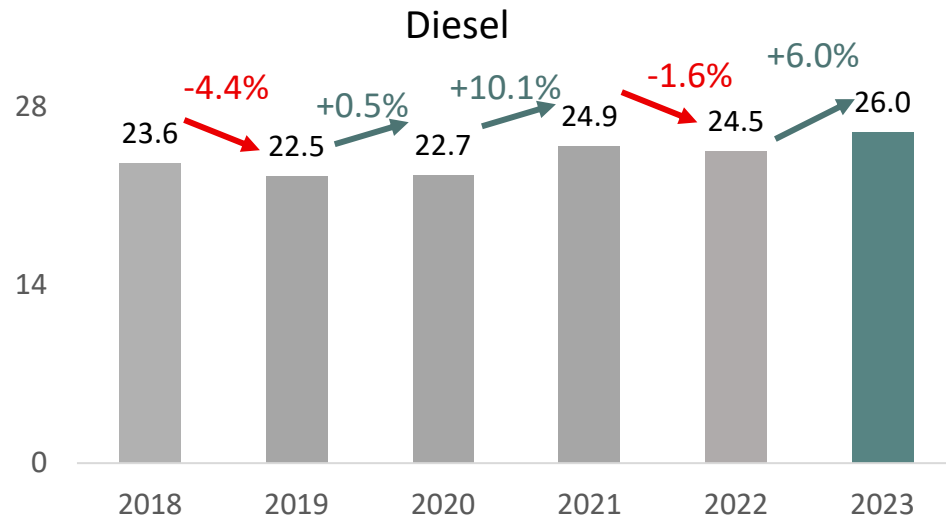
- Catalyst changes
- Checks and maintenance on distillation columns, heat exchangers, furnaces and flare.
- Detailed planned maintenance

Completion:  
92 days

Refinery	Unit	Starting Quarter	Duration (weeks)	Purpose	Planned
İzmit	Crude Oil & Vacuum	Q4	5	Periodic Maintenance	Planned
	Desulphurizer	Q4	5		Planned
	RUP	Q1	13		Planned
	FCC	Q2	6	Periodic Maintenance	Planned
İzmir	FCC	Q3-Q4	21	Revamp	Planned
	Crude Oil , Vacuum, HYC	Q1	7	Periodic Maintenance	Ongoing
Batman	Crude Oil & Vacuum	Q4	4	Seasonal	Planned

# Turkish Market Fuel Consumption 2018-2023

Million  
Tons



# Competition - STAR Refinery

## Timeline



- Feasibility studies began in 2010 and construction kicked off in 2011
- Goldman Sachs has acquired a 13% stake in SOCAR Turkey for \$1.3 billion.
- Total investment size 6.3 bn USD, with 3.3 bn USD credit agreement.
- Following the completion of construction late 2018, reached full capacity utilization in August 2019
- Star reached to 13 mn tons of capacity

## Turkish Market Structure (mn tons, 2023)

Turkey Demand	Tüpraş	STAR	Total	Turkish Market Demand*	Balance
LPG	0.9	0.2	1.1	4.4	<b>-3.3</b>
Petchem F.	0.2	1.7	1.9		
Gasoline	5.1		5.1	4.1	<b>1.0</b>
Jet Fuel	4.6	1.3	5.9	5.4	<b>2.1</b>
Diesel	8.9	6.9	15.7	26.0	<b>-9.3</b>
Fuel Oil	1.3		1.3	0.3	<b>1.0</b>
Bitumen	2.6		2.6		
Pet coke	0.8	0.9	1.7		
<b>Total</b>	<b>~30</b>	<b>~13</b>	<b>~43</b>		

\* Source: EMRA

# Competition - Regional Competition

- Tüpraş competes with 69 refineries in the Mediterranean and Black Sea markets.
- Mediterranean regional product balance is also affected from Middle East, North West Europe and Asia flows

## Mediterranean



**54 Refineries ~7.7 mbd**

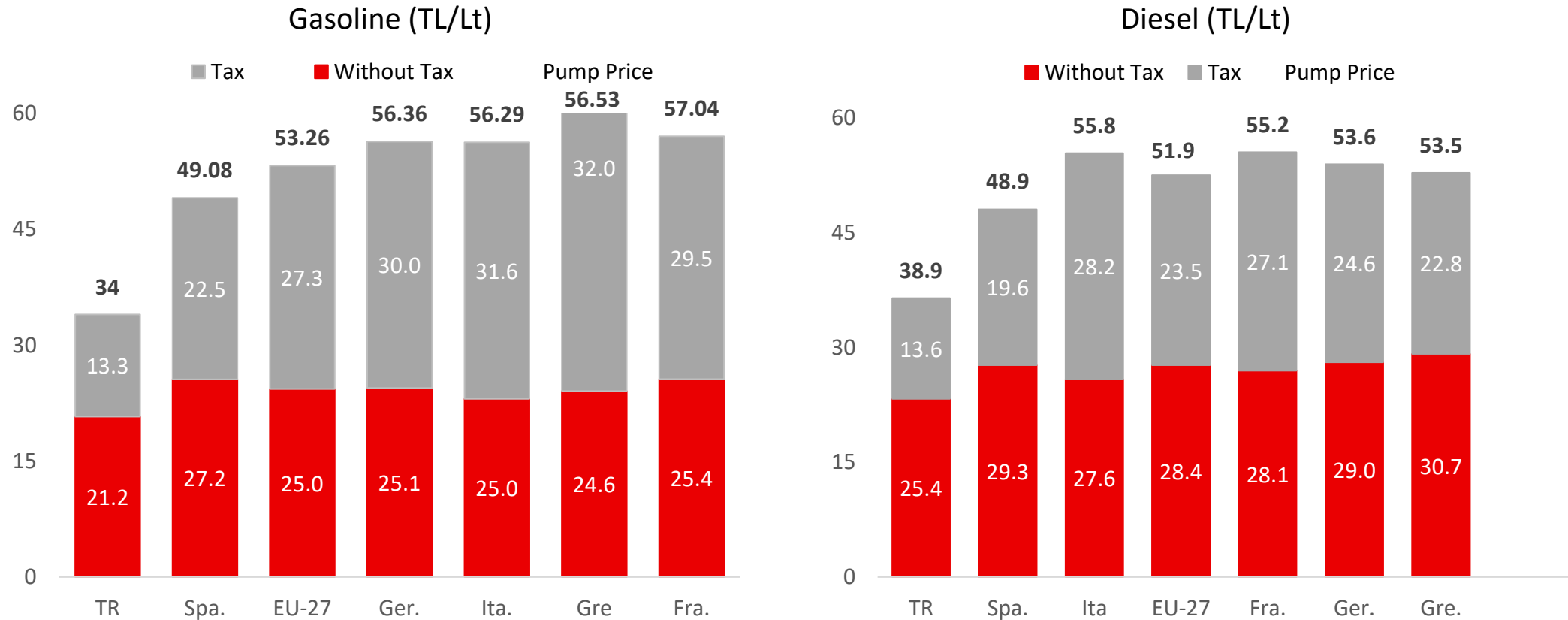
## Black Sea



**15 Refineries ~1.5 mbd**

# European Pump Price Comparison

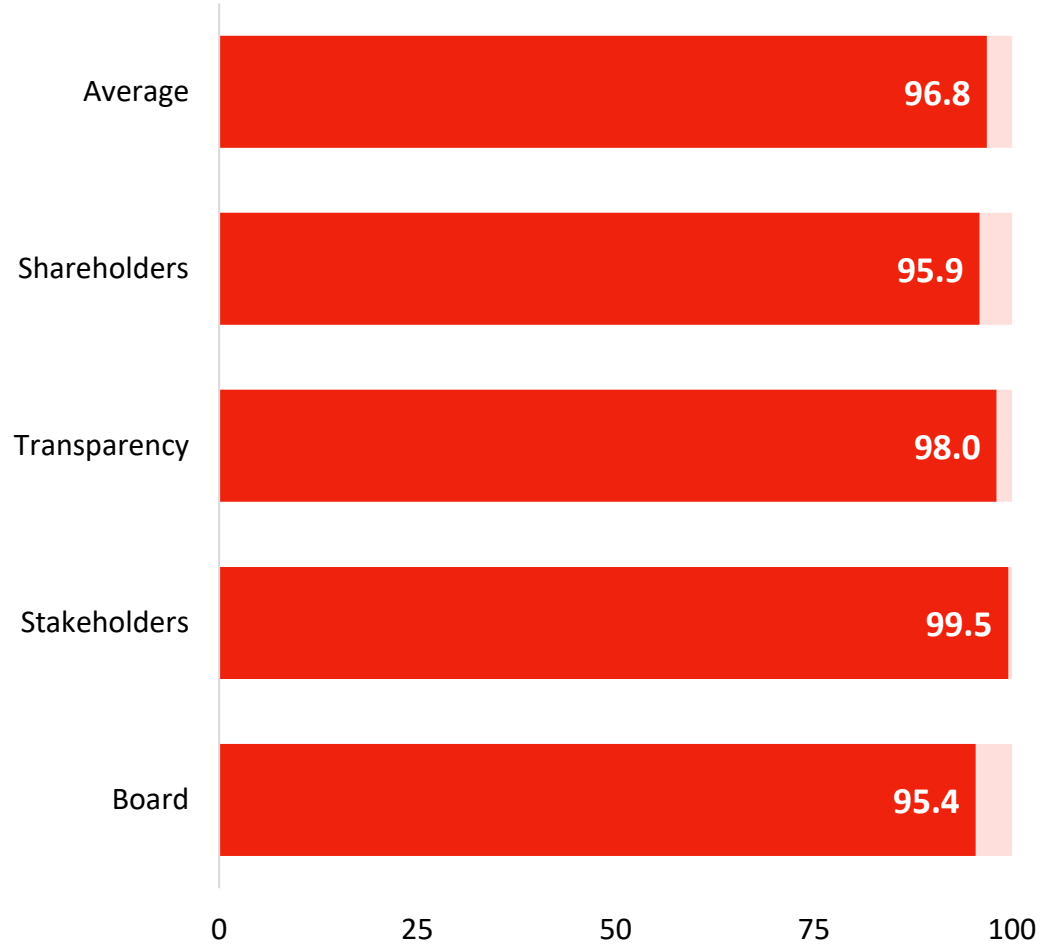
Turkish fuel prices are highly competitive with other European countries.



Prices of Europe and Turkey, as of December 31, 2023

# Tüpraş - Ratings

## Tüpraş BIST Corporate Governance Rating Score

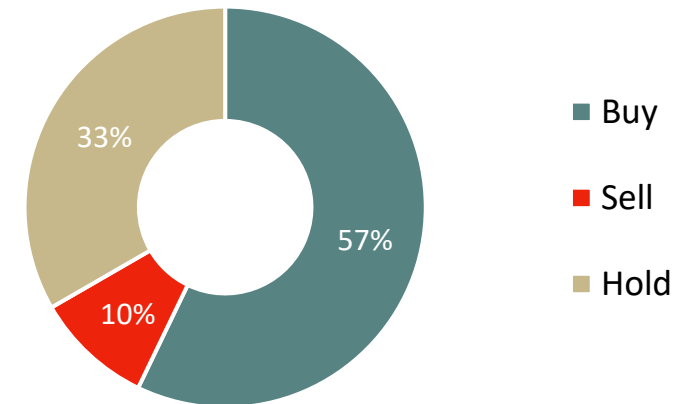


Source: SAHA Corporate Governance and Rating Services Inc. (November 2023)

## Credit Rating Scores

Foreign Currency Long Term	FitchRatings	MOODY'S	S&P Global Ratings
Tüpraş	B+ (Stable)	B2 (Positive)	
Turkey	B + (Positive)	B3 (Positive)	B (Positive)
Koç Holding		B2 (Positive)	BB-(Positive)

## Analyst Recommendations

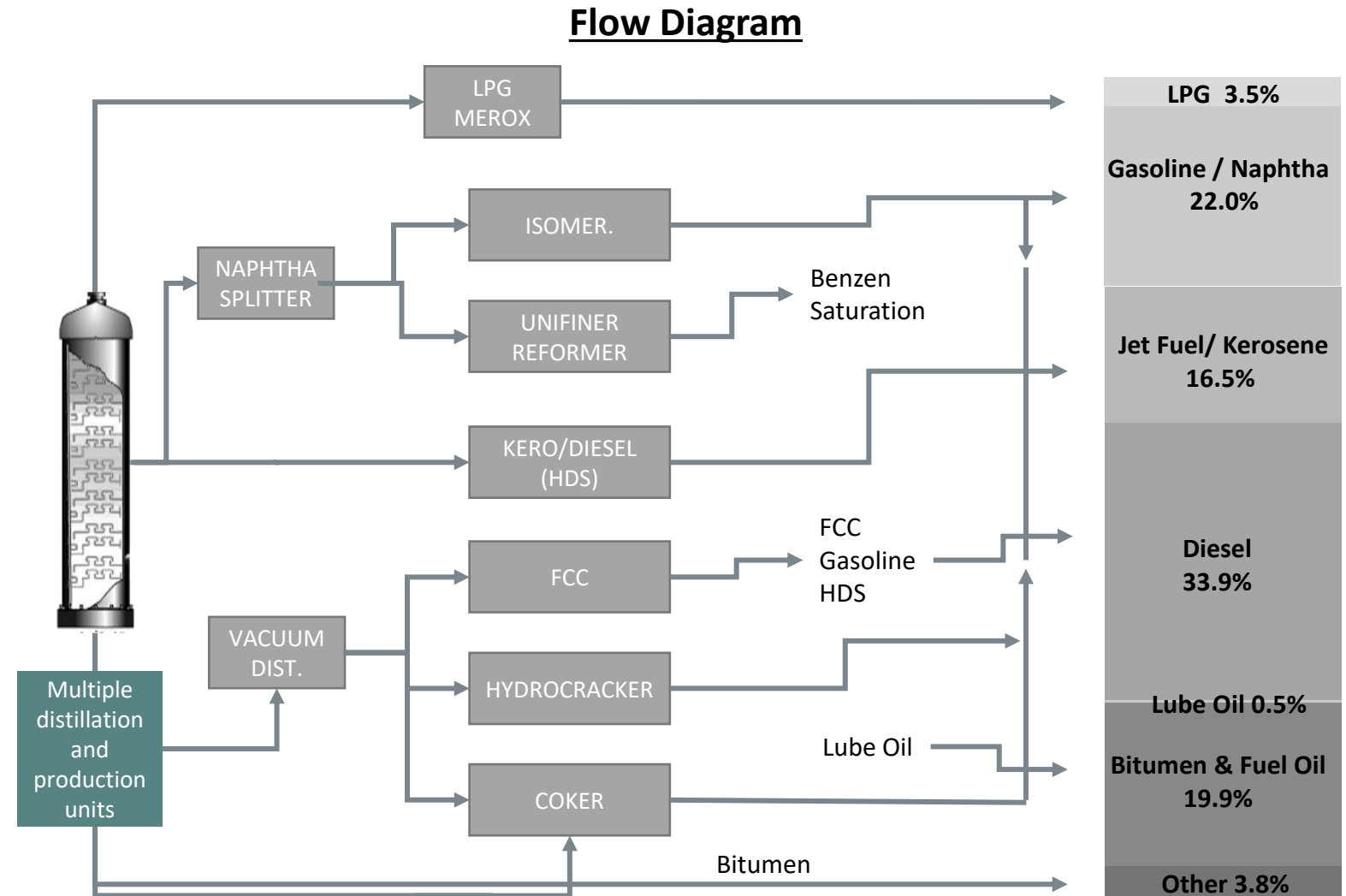


Source: Bloomberg\*  
\*data as of March'24

# Tüpraş Production Flow and Yield Breakdown

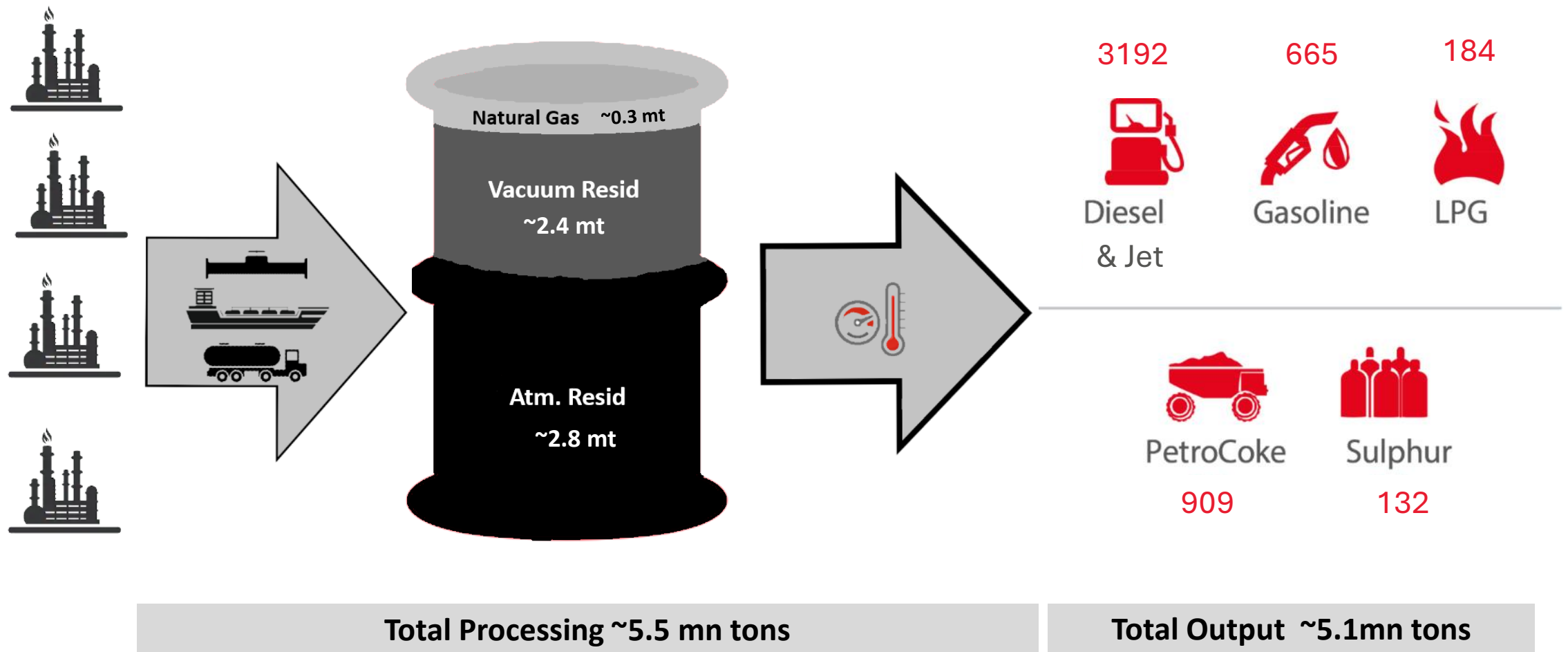
- Tüpraş has 30 million tons of production capacity
- Tüpraş operates 4 refineries with an integrated system optimization program

Key Units	# of Units	Capacity (m <sup>3</sup> /d)
CRUDE OIL	8	99,420
VACUUM DIST.	8	42,752
HYDROCRACKER	4	18,032
ISOMERATION	3	7,804
UNIFINER REFORMER	5	16,225
KERO/DIESEL (HDS)	9	37,265
FCC	2	4,650
COKER	1	9000
NAPHTA SPLITTER	8	
LPG MEROX	6	

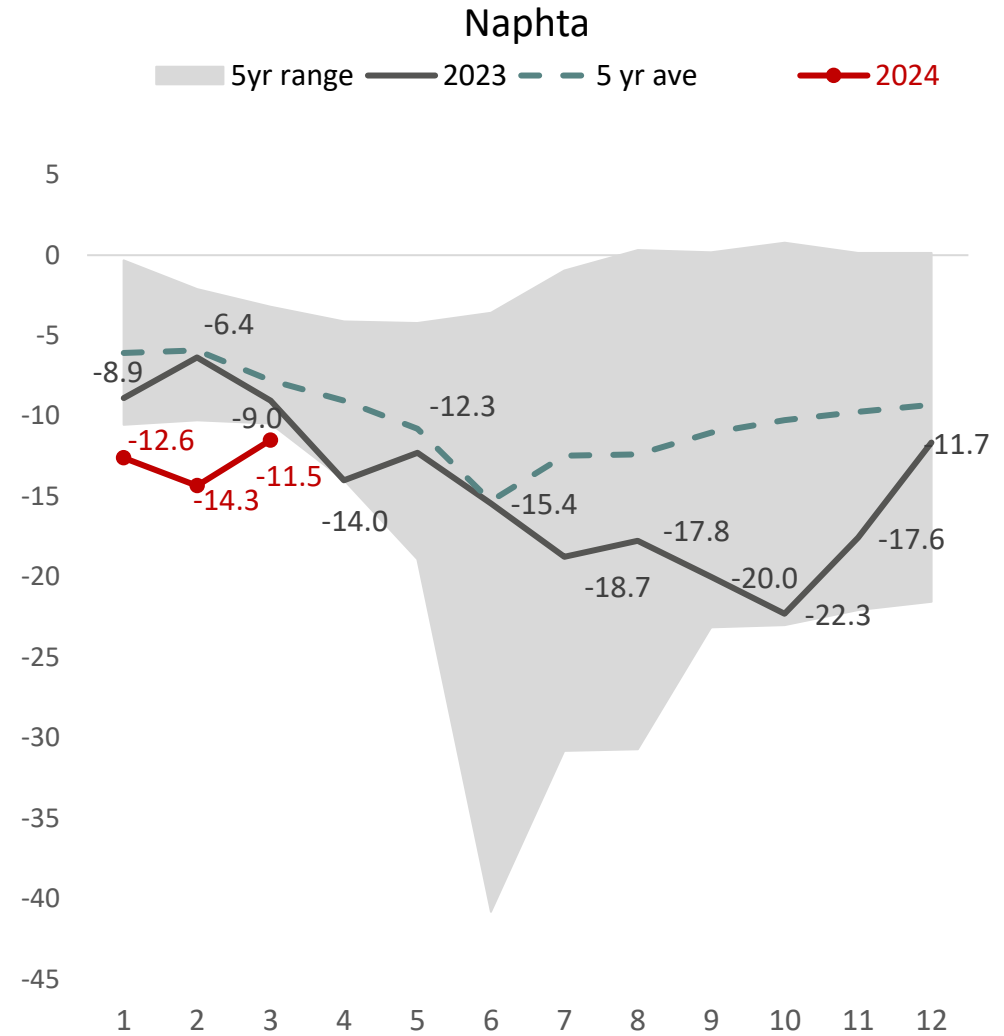
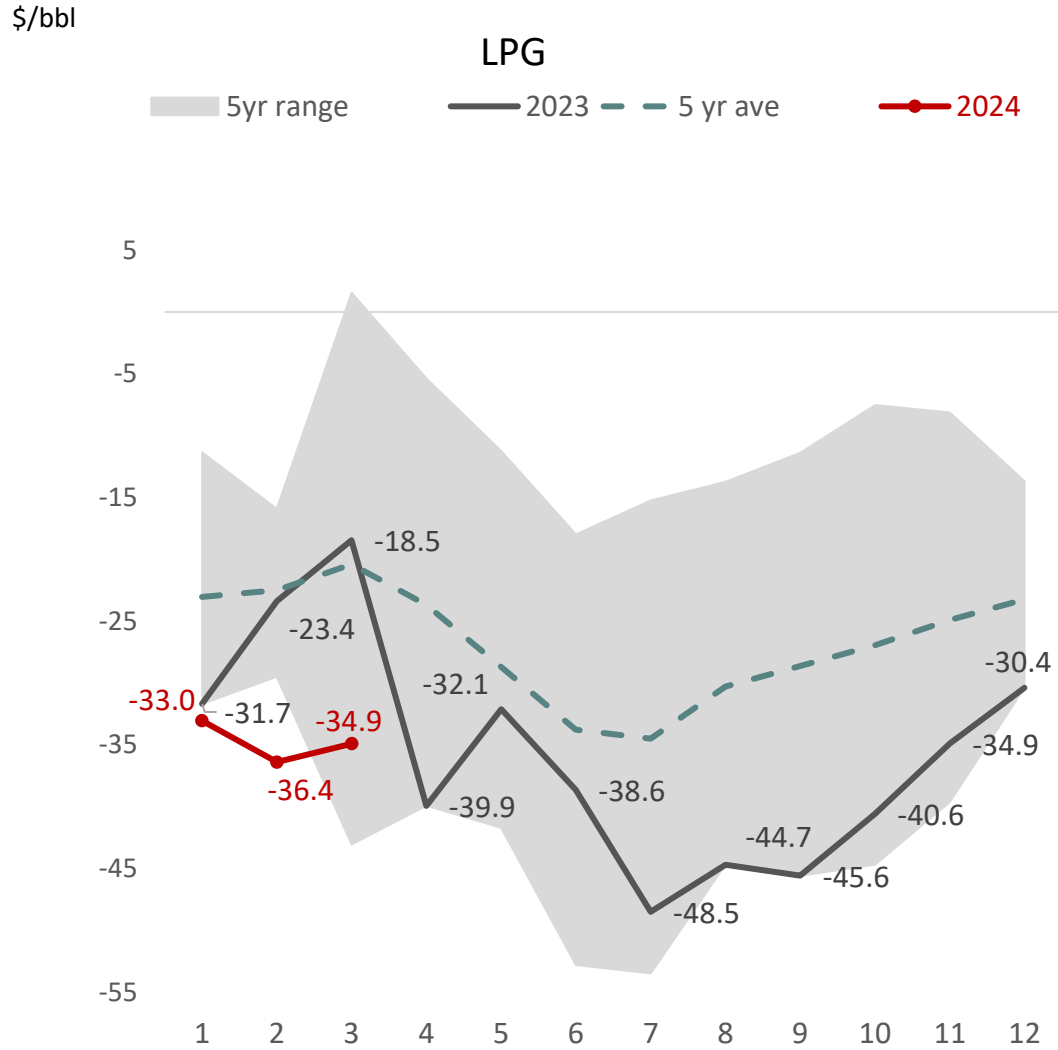


# RUP Feedstock and Production

- Residuum Upgrade Plant (RUP) was completed in 2015 and it is the main conversion unit of Tüpraş.
- The second scheduled maintenance began in Q1 2024, is expected to be completed in 92 days.



# LPG and Naphta Cracks



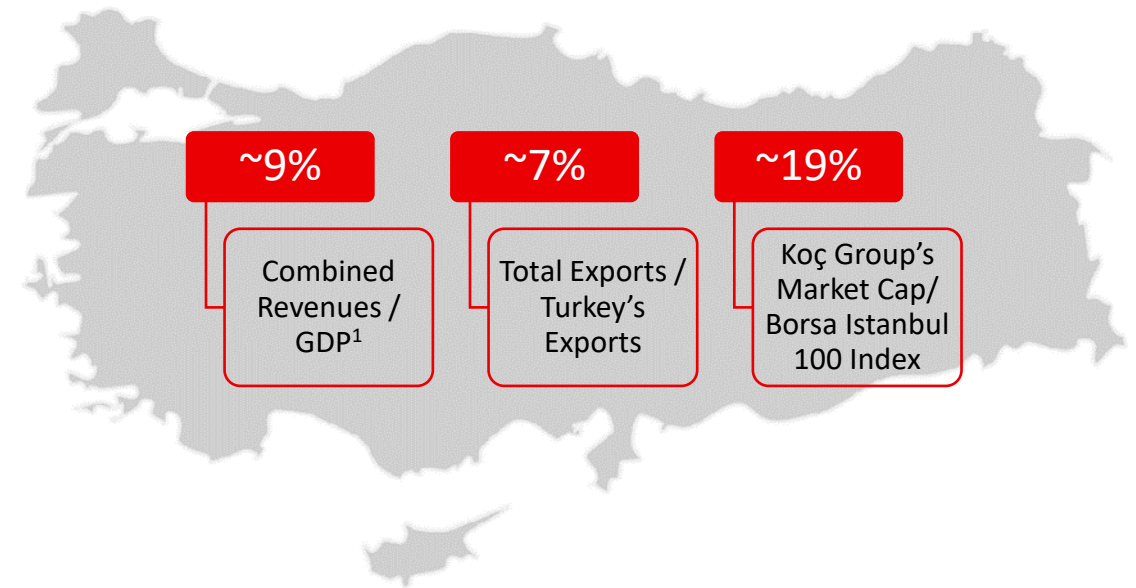
Data as of 29 March, 5 year range shows 2019-2023

## Turkey's Leading Investment Holding Company

- Koç Holding is Turkey's largest industrial and services group
- The only Turkish company in Fortune Global 500<sup>2</sup>.

## Pioneer in its Sectors

- Leading positions with clear competitive advantages in sectors with long-term growth potential such as energy, automotive, consumer durables and finance.



Notes : Data as of YE22

(1) 2022 Report (based on consolidated revenues)

(2) 2022 report (based on consolidated revenues)

 **Tüpraş**

 **Koç**



Investor  
Presentation

Latest Webcast



2023 Integrated  
Annual Report

Strategic  
Transition Plan



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