




Energy To the future

 **Tüpraş**

 **Koc** | December 2023

Investor Presentation

Disclaimer

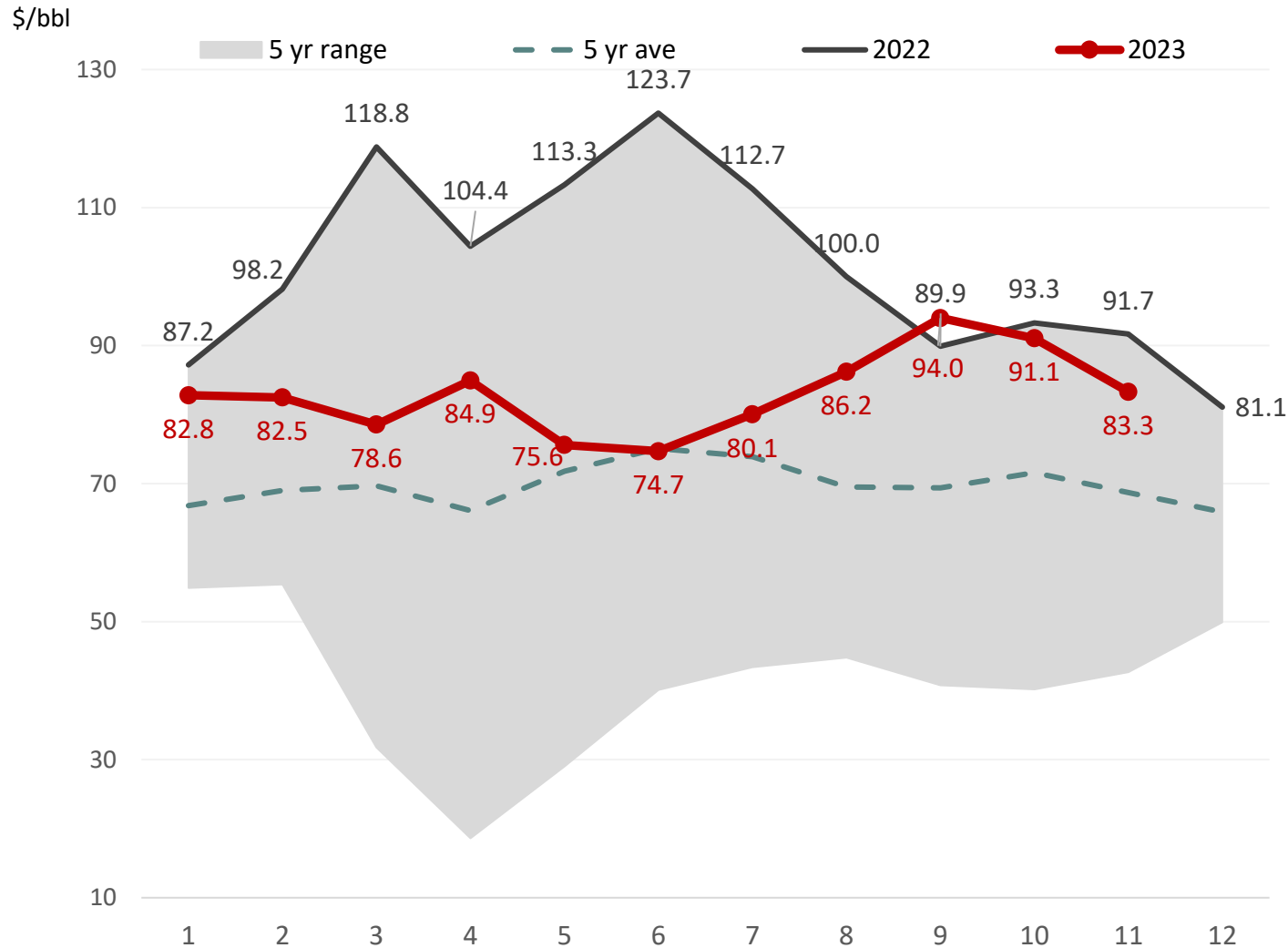
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Refining Market

Brent Crude Prices



- + Russian-Ukraine war
- + Impact of sanctions
- + Post-pandemic demand recovery

- Recession fears
- Zero Covid Policy and its impact on Chinese demand
- SPR releases

Year	Average Brent Prices (\$/bbl)
2018	71.0
2019	64.3
2020	41.7
2021	70.7
2022	101.2

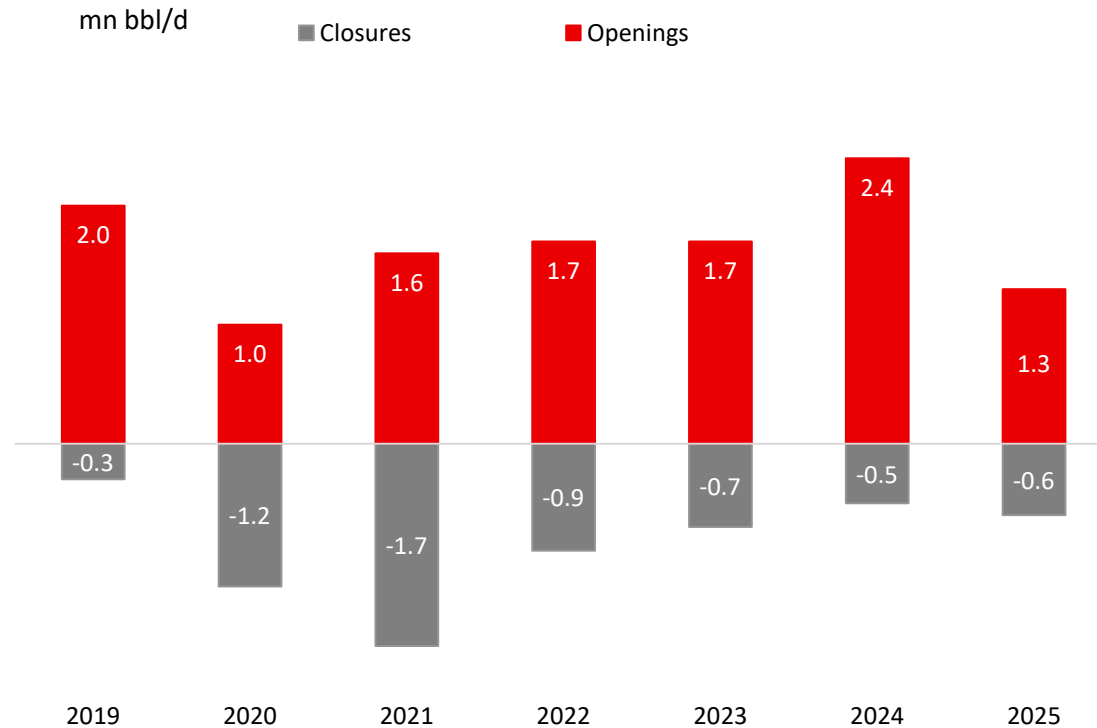
data as 30 November, 5 year range shows 2018-2022

Global Refinery Capacity Changes

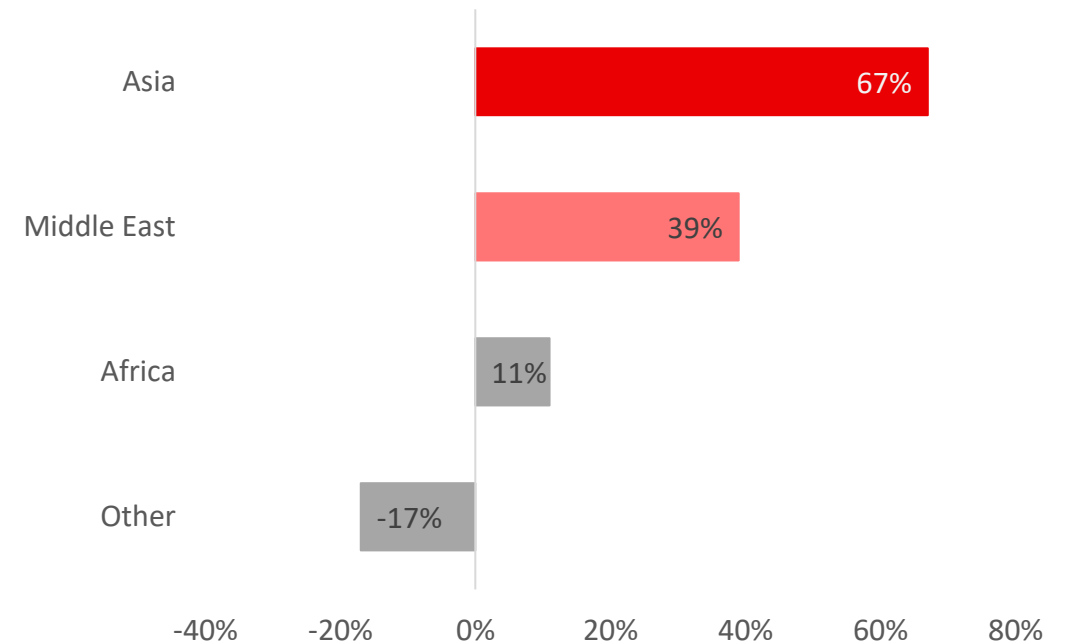
Expectations until 2025:

- In the 2019-2025 period, 67% of the net capacity increase comes from Asia and 39% from the Middle East Region.
- 67% of the closures intensified after the pandemic come from the OECD region.

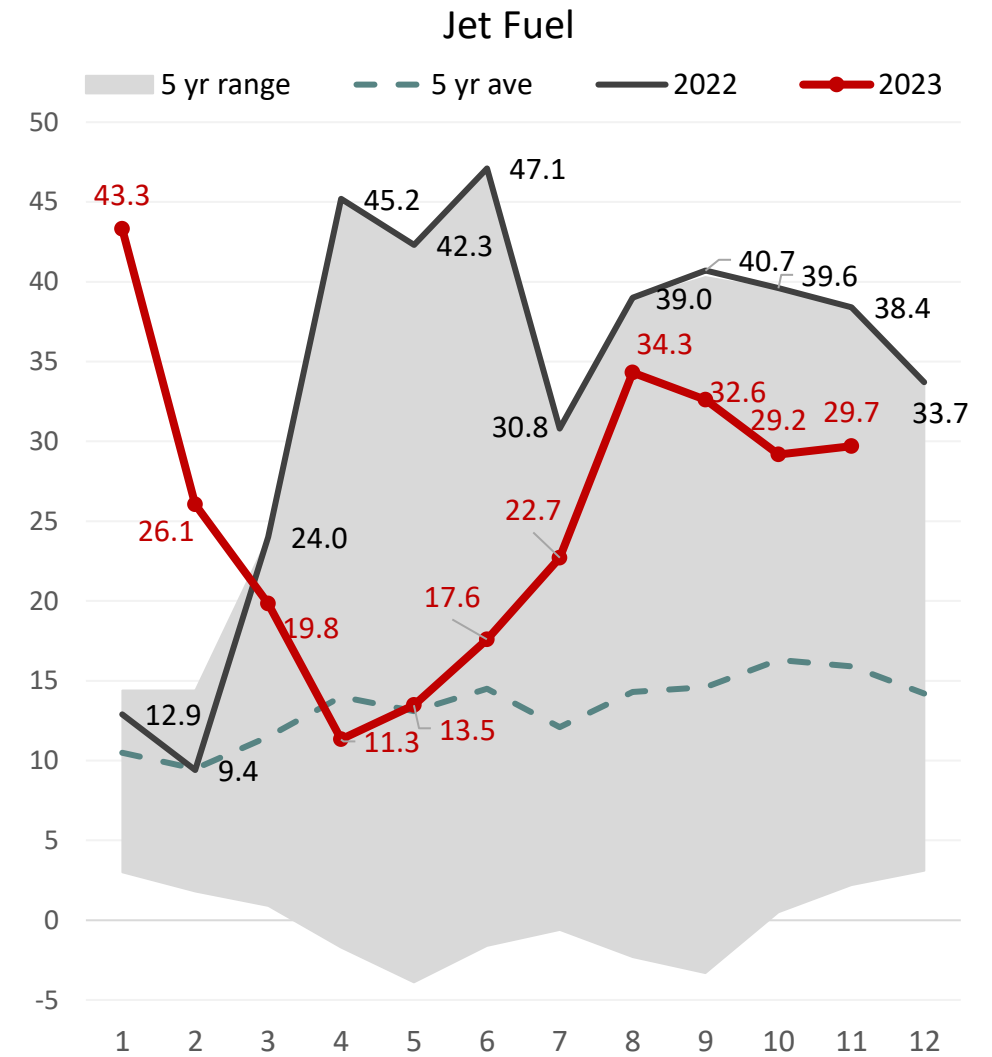
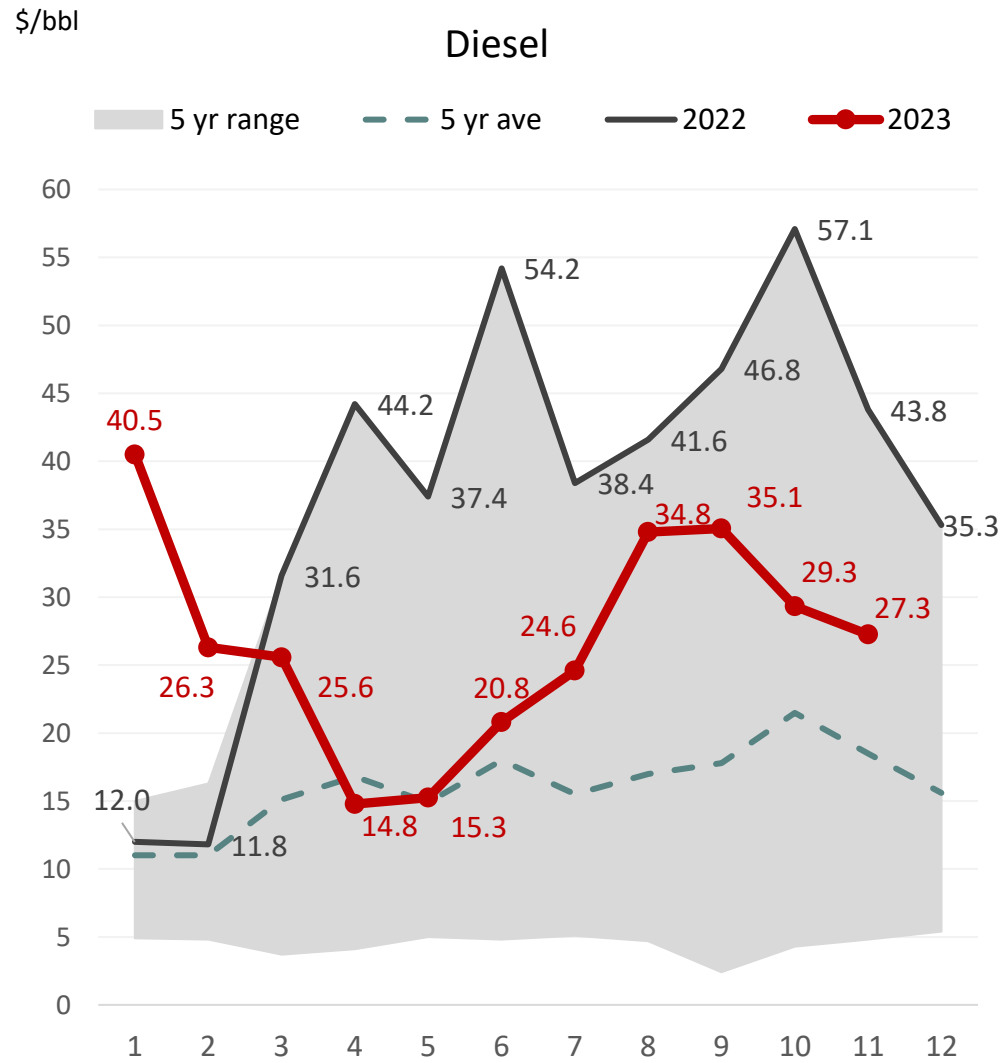
2019-2025 Net Capacity Additions



Capacity Additions by Region

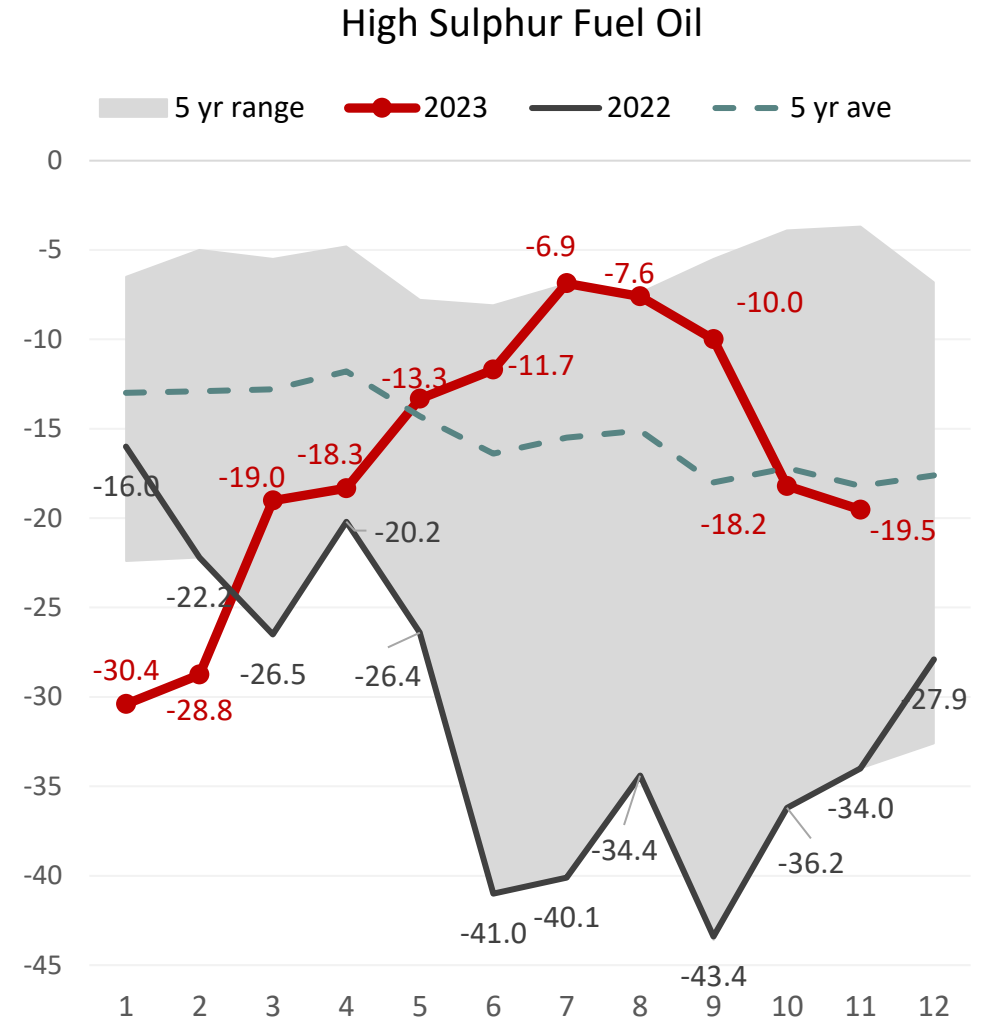
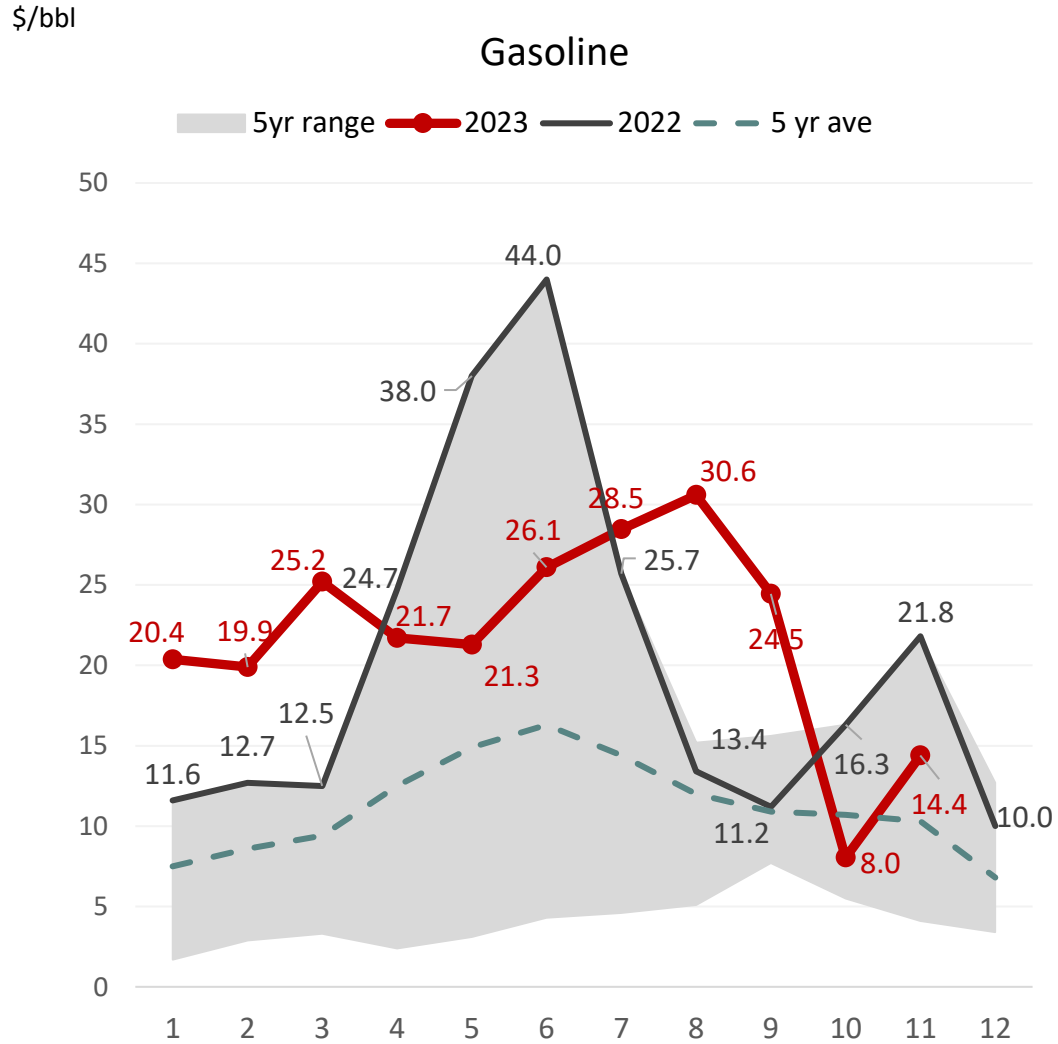


Middle Distillate Cracks



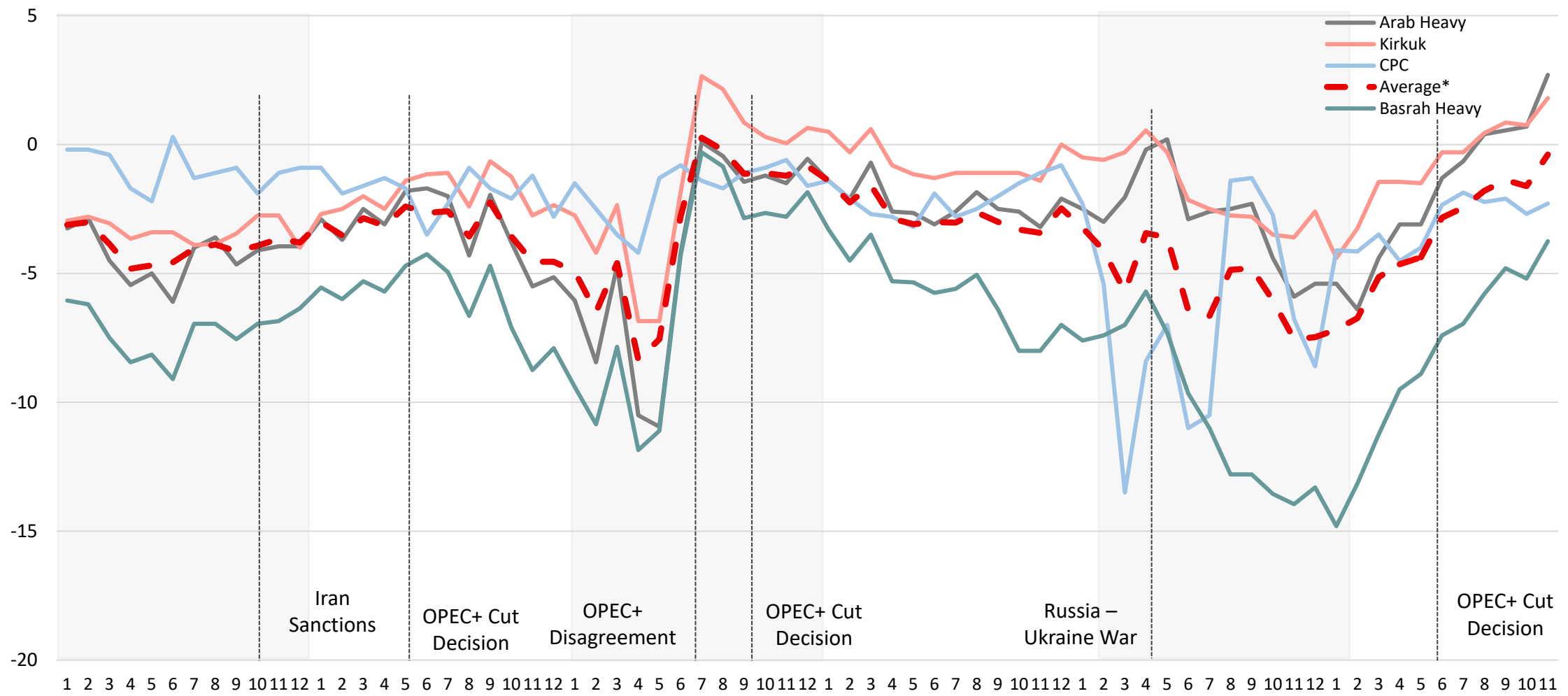
data as 30 November, 5 year range shows 2018-2022

Gasoline and High Sulphur Fuel Oil Cracks



data as 30 November, 5 year range shows 2018-2022

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



data as 30 November

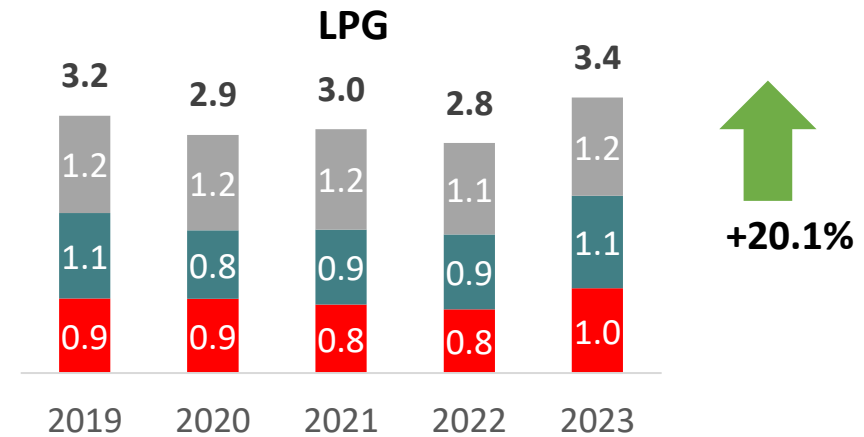
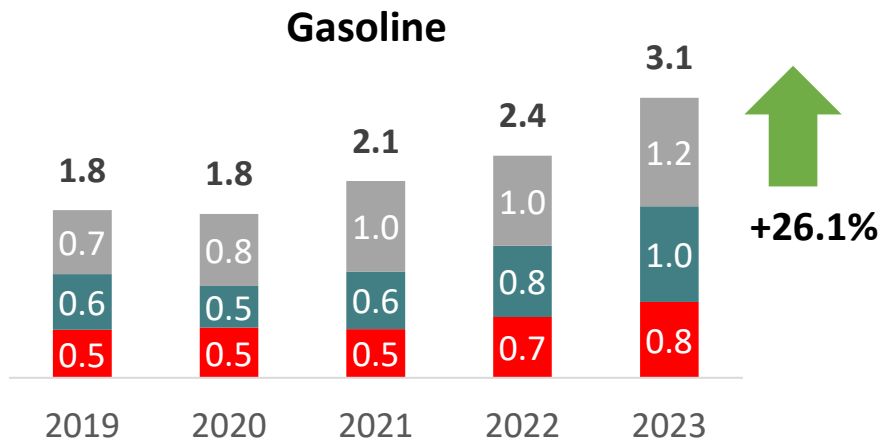
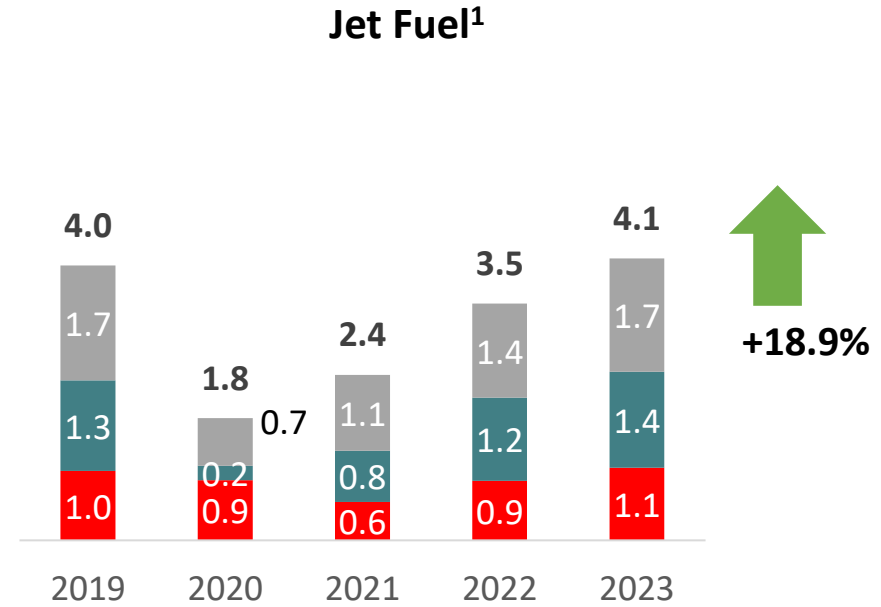
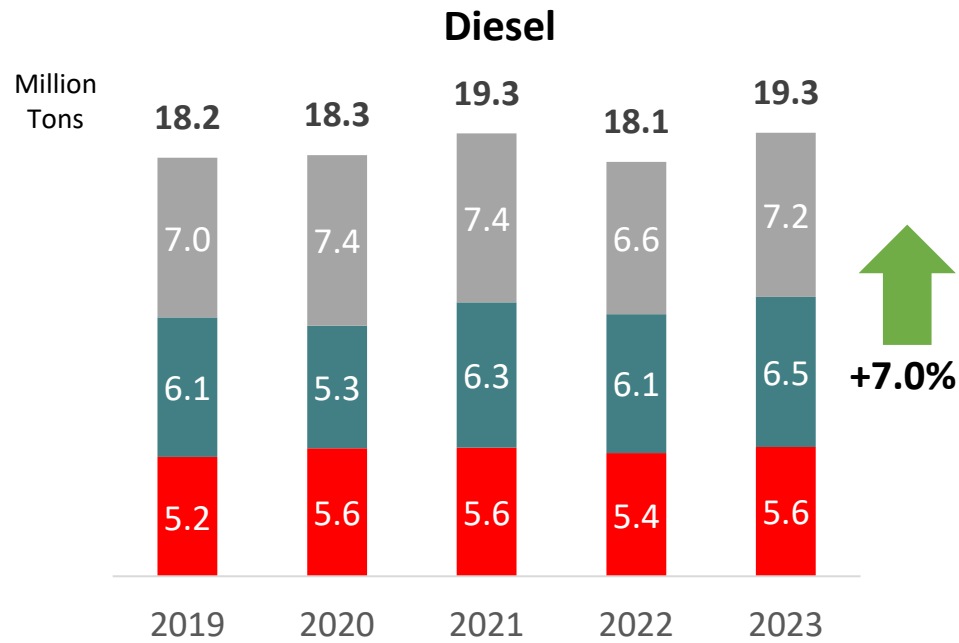
*Simple average of listed differentials



Turkish Market

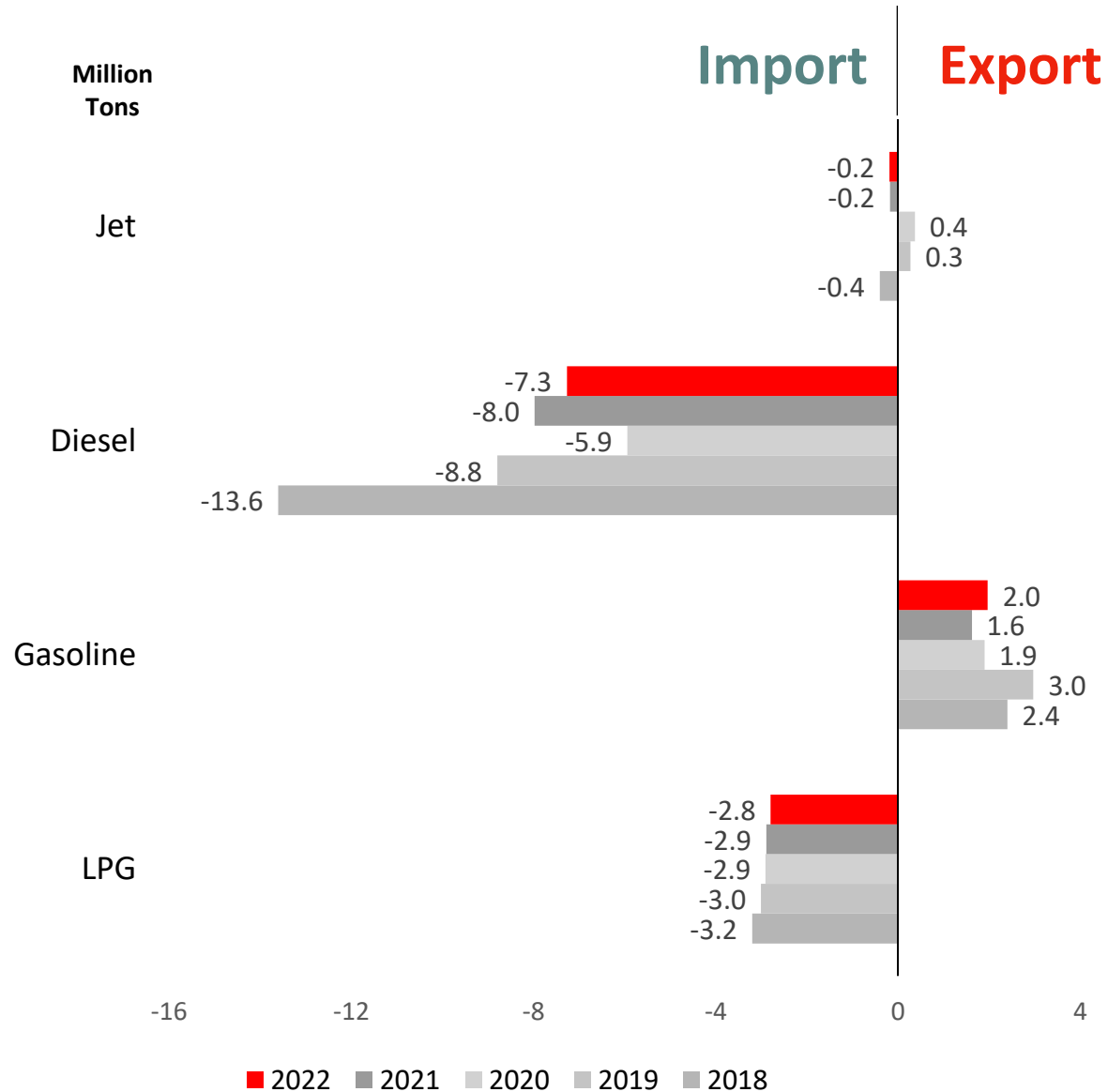
Turkish Market, 9M 2023

■ Q1 ■ Q2 ■ Q3



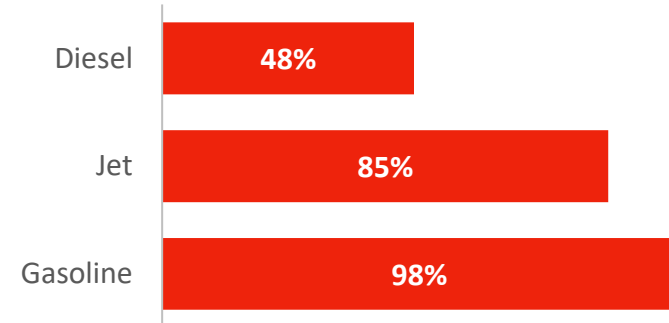
¹Transit flight consumption included

Turkey's Net Import / Export Balance

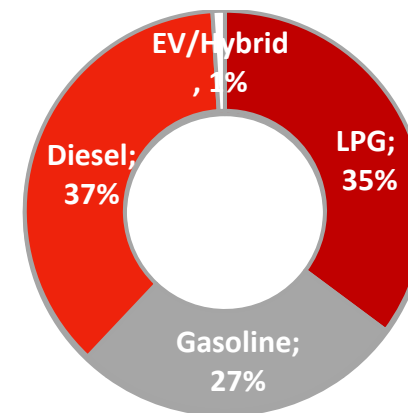


Market Share of Tüpraş

2022 12M



Fuel Choice of Passenger Cars 2022

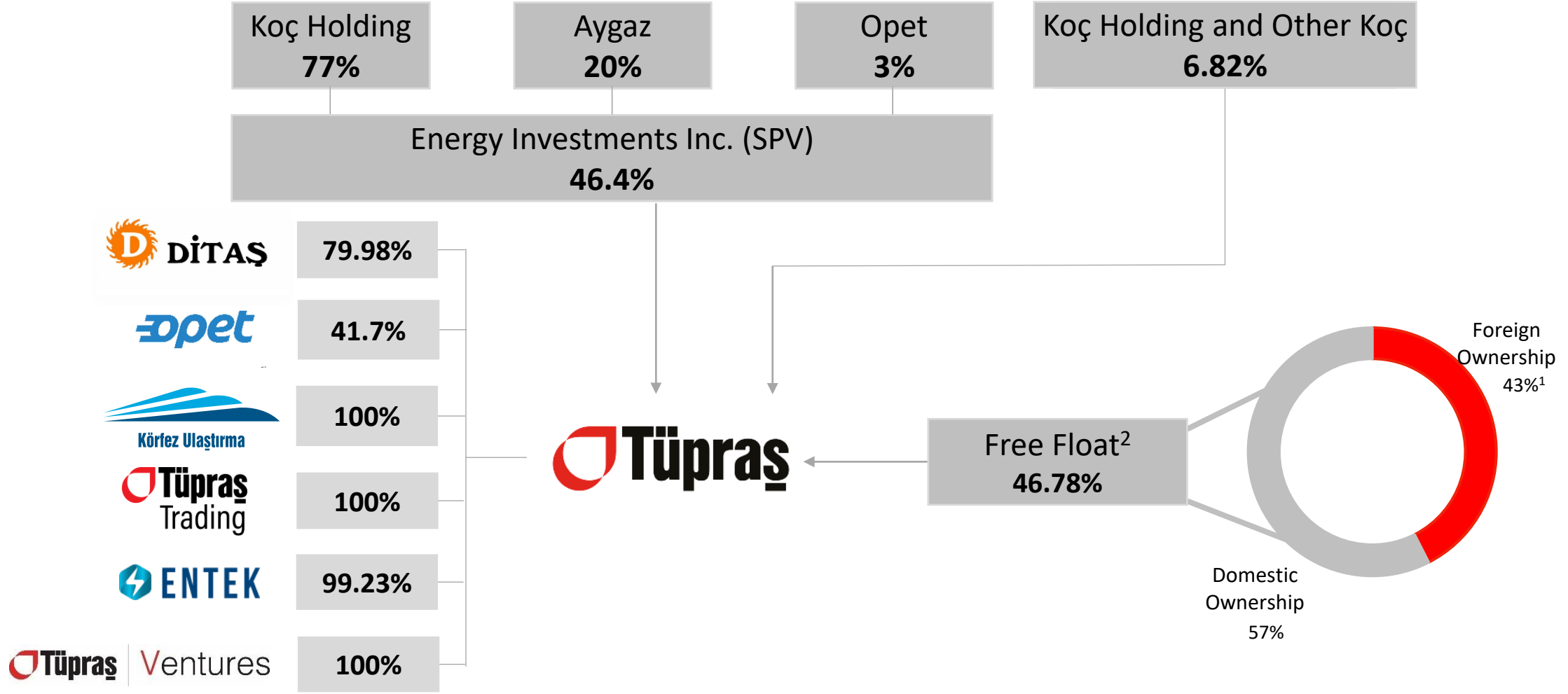




Company Overview

Tüpraş Shareholder Structure

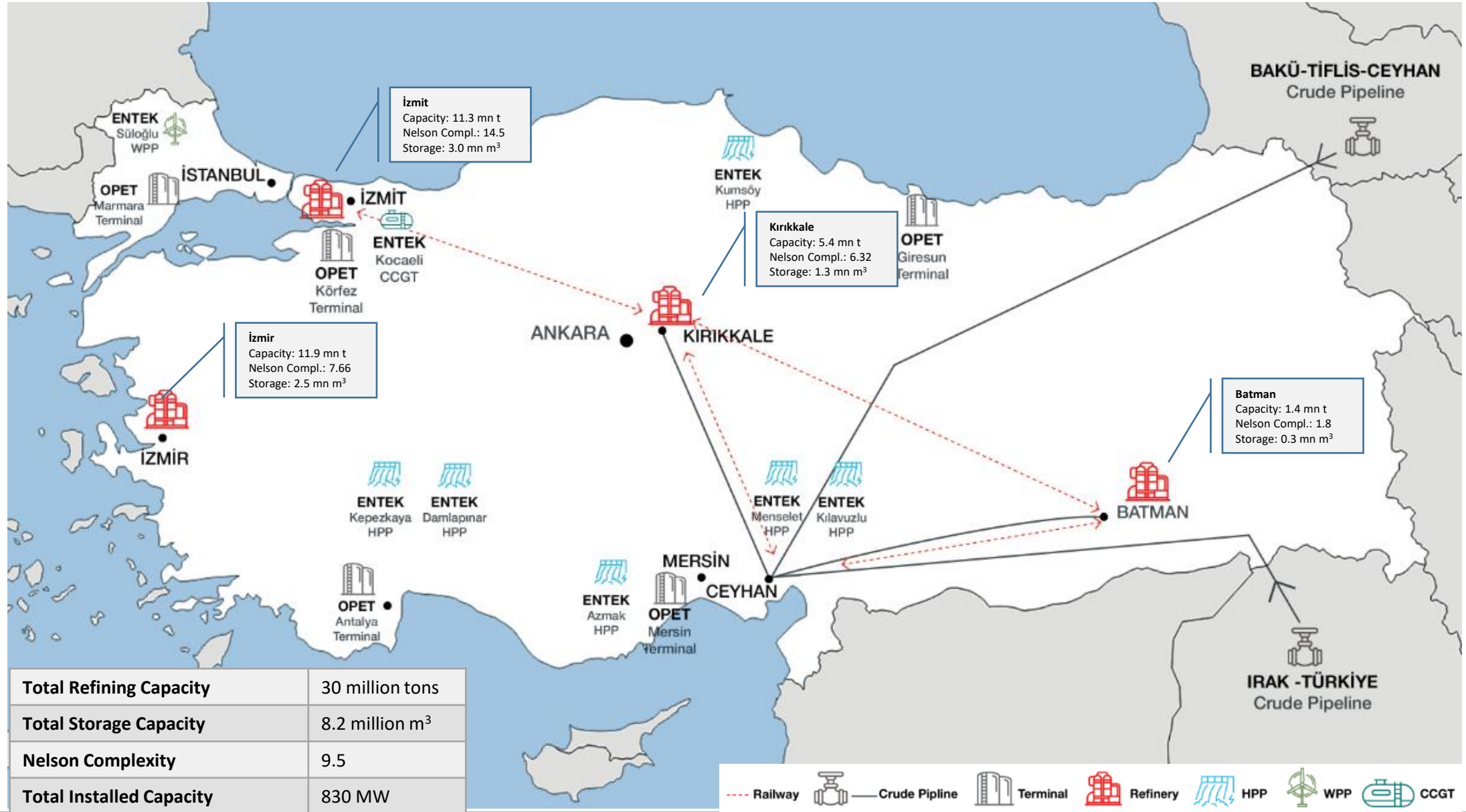
Tüpraş is Turkey's biggest industrial company and leading refiner.



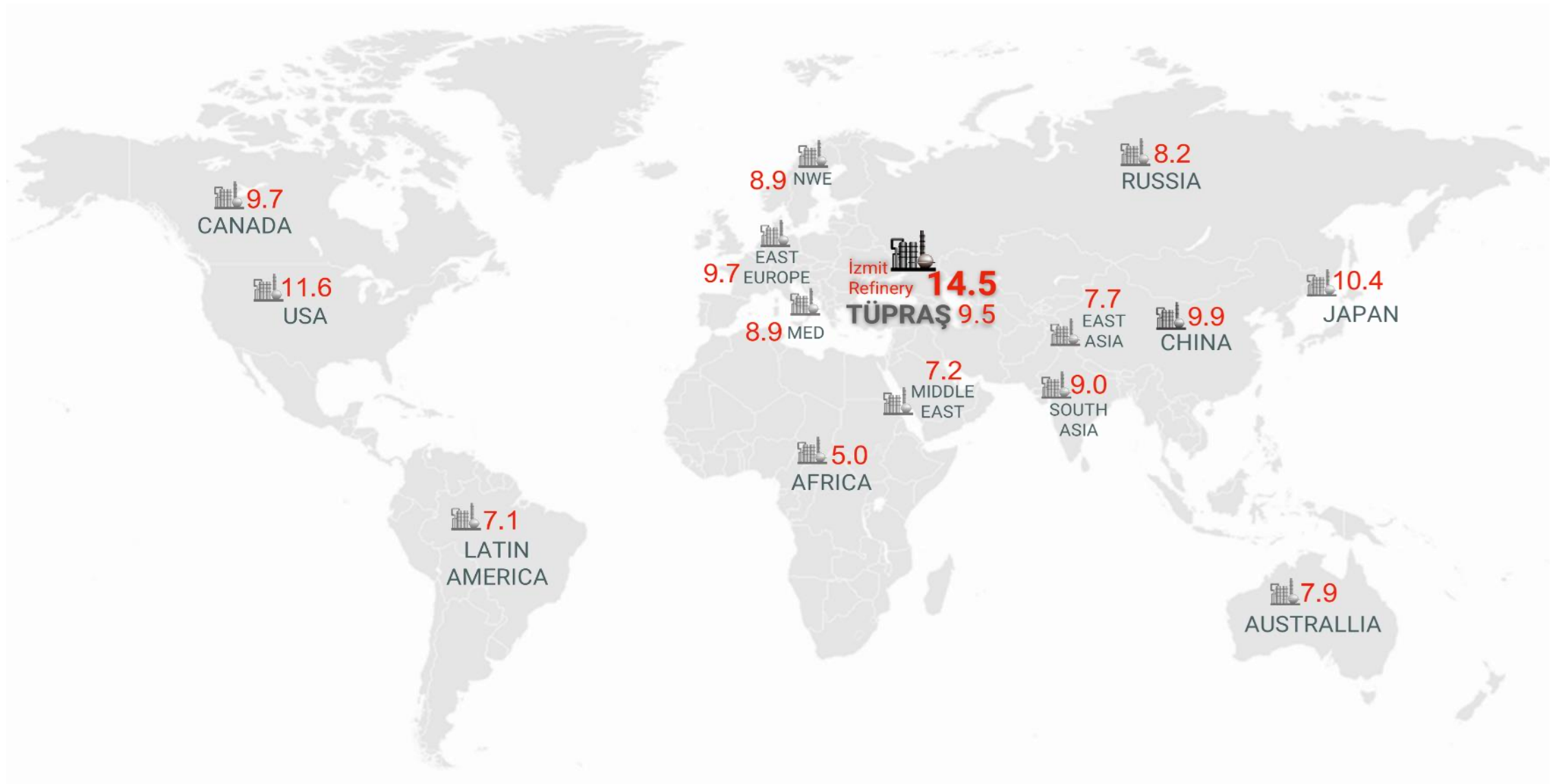
¹ As of December 31st, 2022

² 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 30 September 2023.
- As of September 2023 Market share: 19.25% in white products; 27.65% 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
- 7 Product Tanker: 116,533 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 2022
- 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 1.2 GWh, increased by 22% year on year in 2022
- EBITDA figure was TL 1.4 bn, nearly quadrupled

Tüpraş Ventures

Tüpraş's Share: %100

- Aiming to establish strategic partnerships in new growth areas for energy transformation.
- In 2022, 10 investments were undertaken through Emerald Industrial Innovation Fund.



emerald
Technology Ventures



iongenics

KOC GROUP COMPANIES'
FIRST PRIVATE VENTURE
CAPITAL INVESTMENT FUND



Energy
Transformation



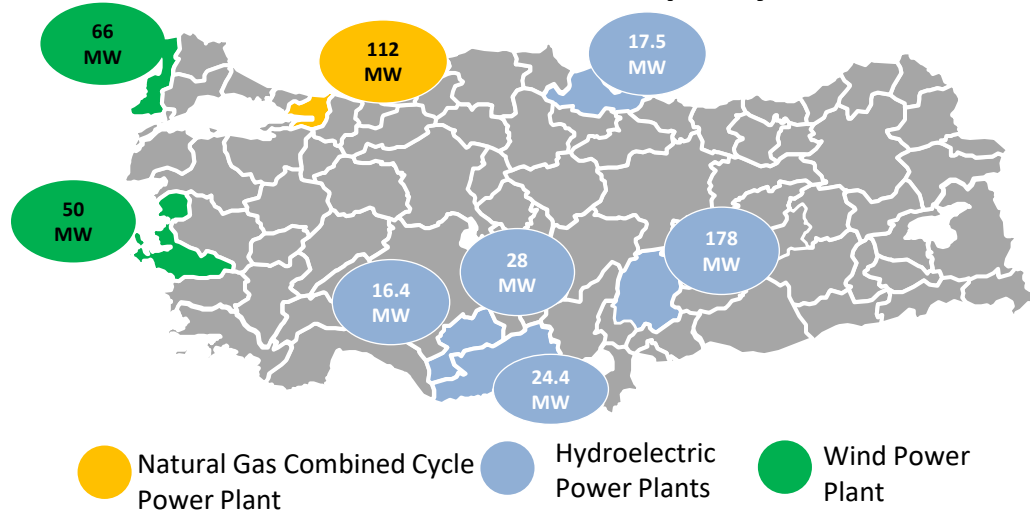
Sustainability



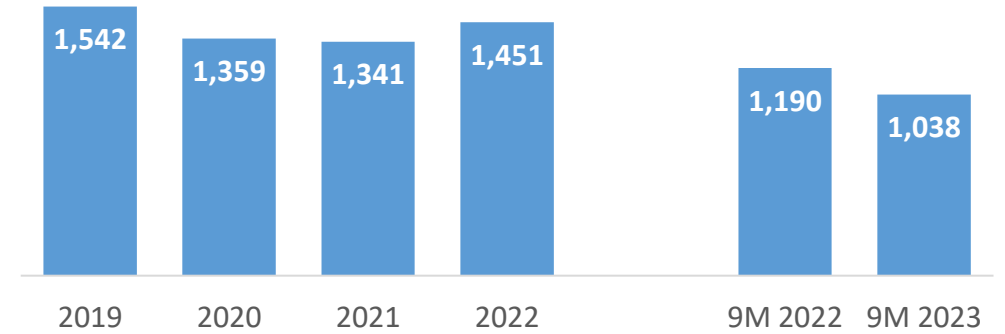
Operational
Excellence

Entek - Electricity (Tüpraş Share: 99.23%)

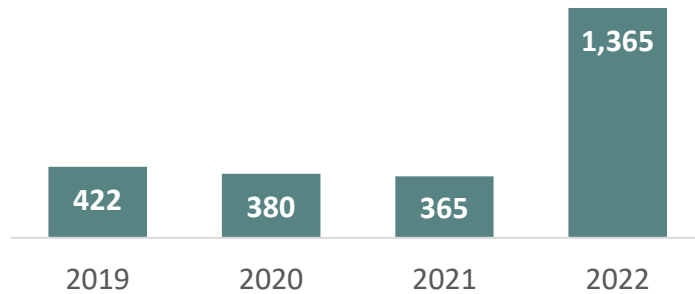
Entek's Installed Capacity



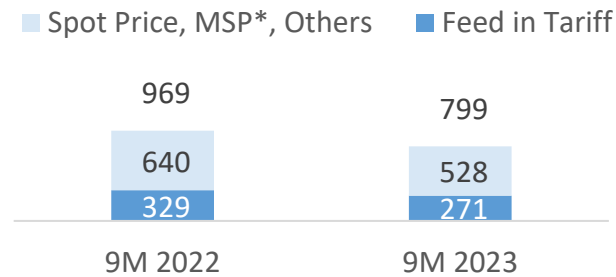
Production (000 MWh)



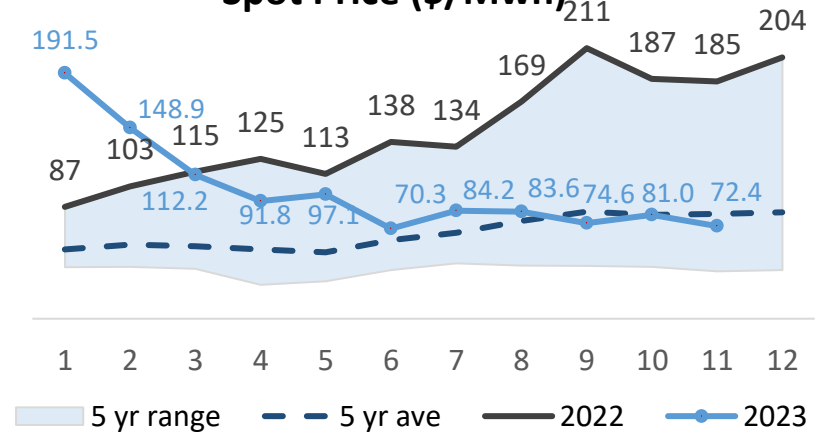
EBITDA (million TL)



Total ZCE Sales from Production (GWh)



Spot Price (\$/Mwh)

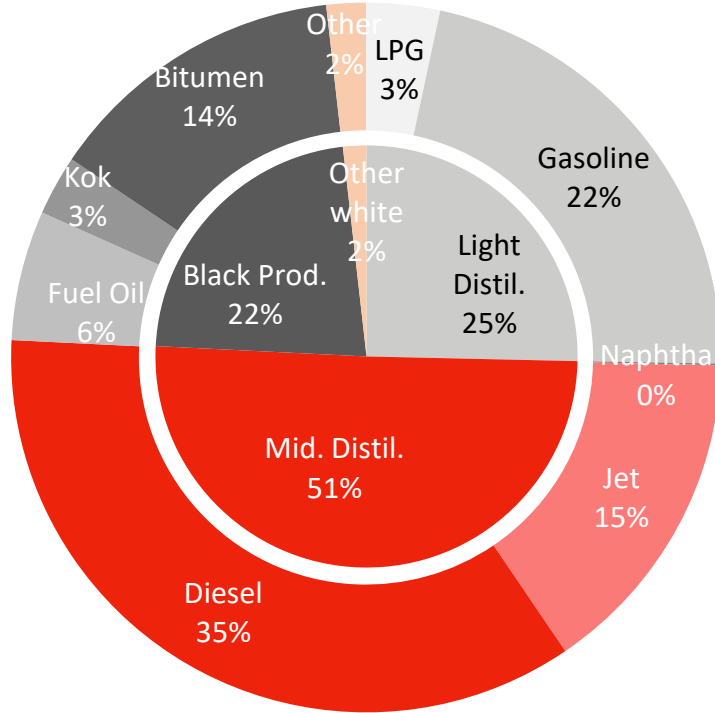




Operations

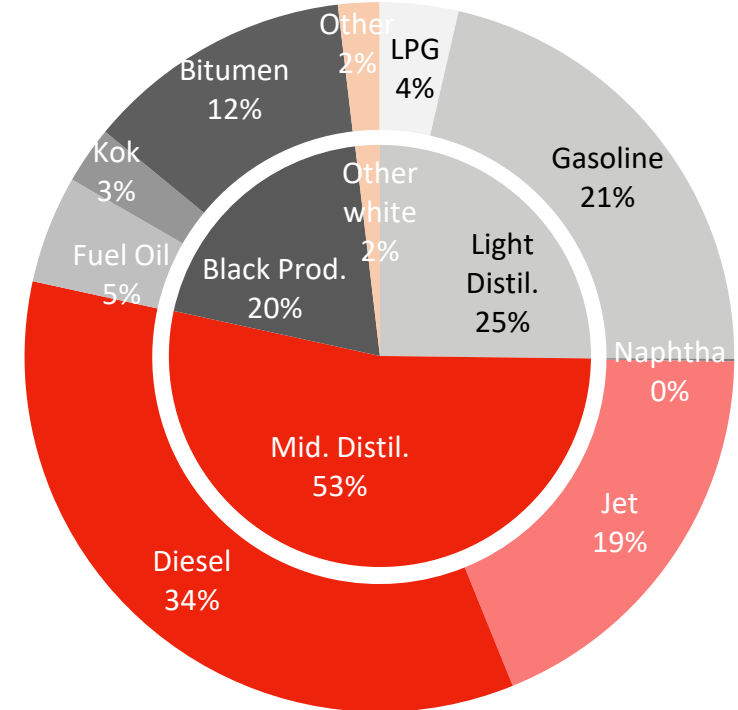
Quarterly Product Yields

Q3 2022



White Product Yield (%)	76.4%
Production	7.0 mn tons
API	30.9

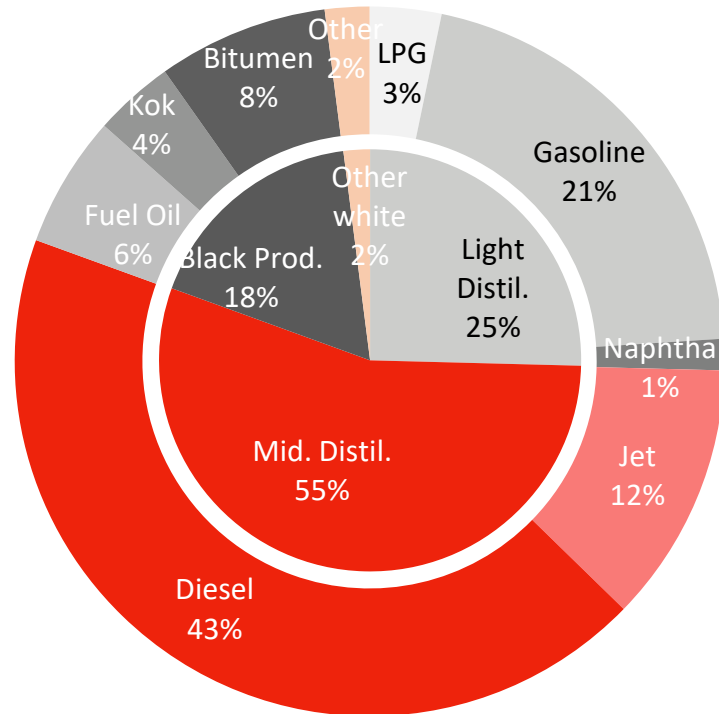
Q3 2023



White Product Yield (%)	79.1%
Production	7.1 mn tons
API	31.6

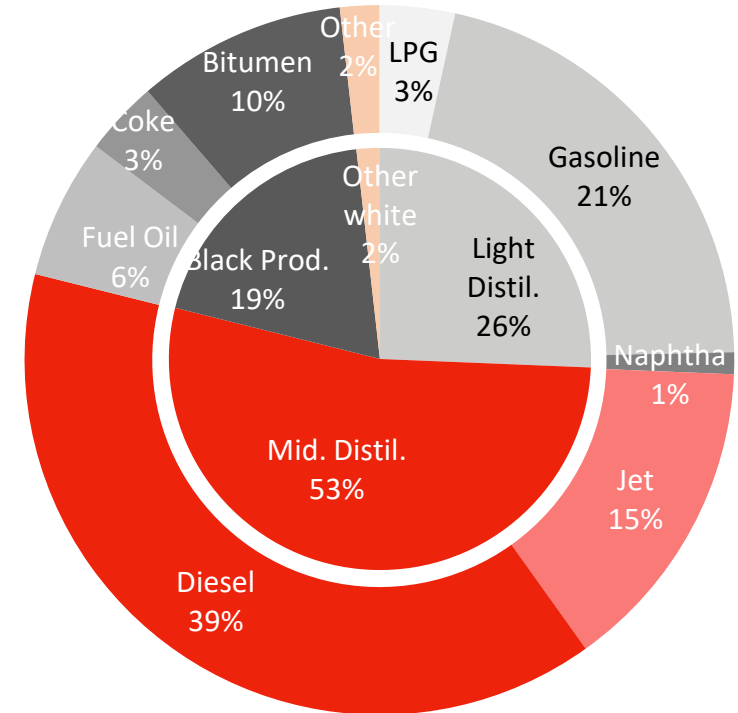
Annual Product Yields

12M 2021



White Product Yield (%)	81.4%
Production	25.1 mn tons
API	31.2

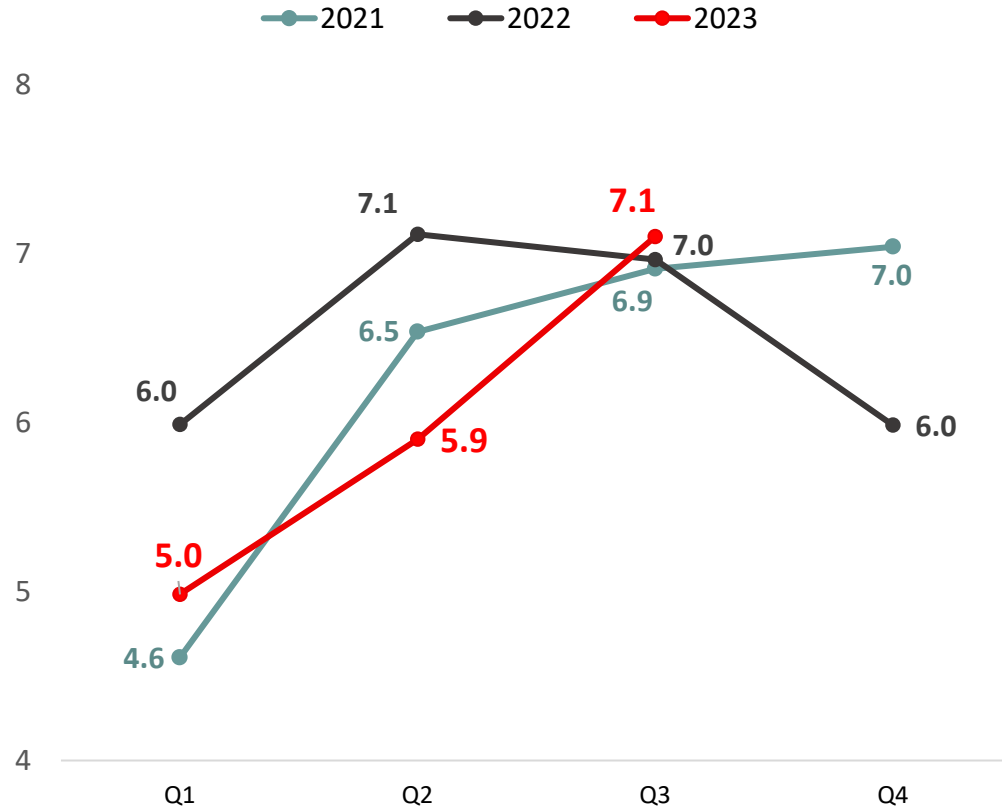
12M 2022



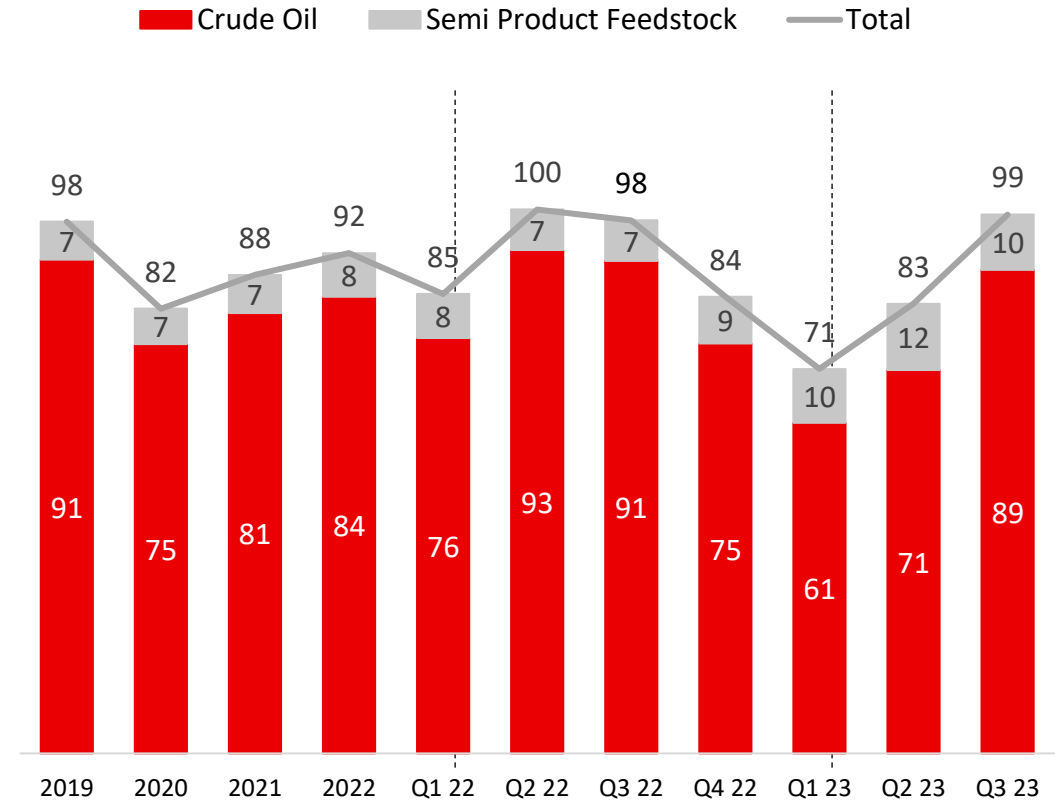
White Product Yield (%)	80.0%
Production	26.0 mn tons
API	31.1

Capacity Utilization and Quarterly Production Volume

Quarterly Production (Million Tons)



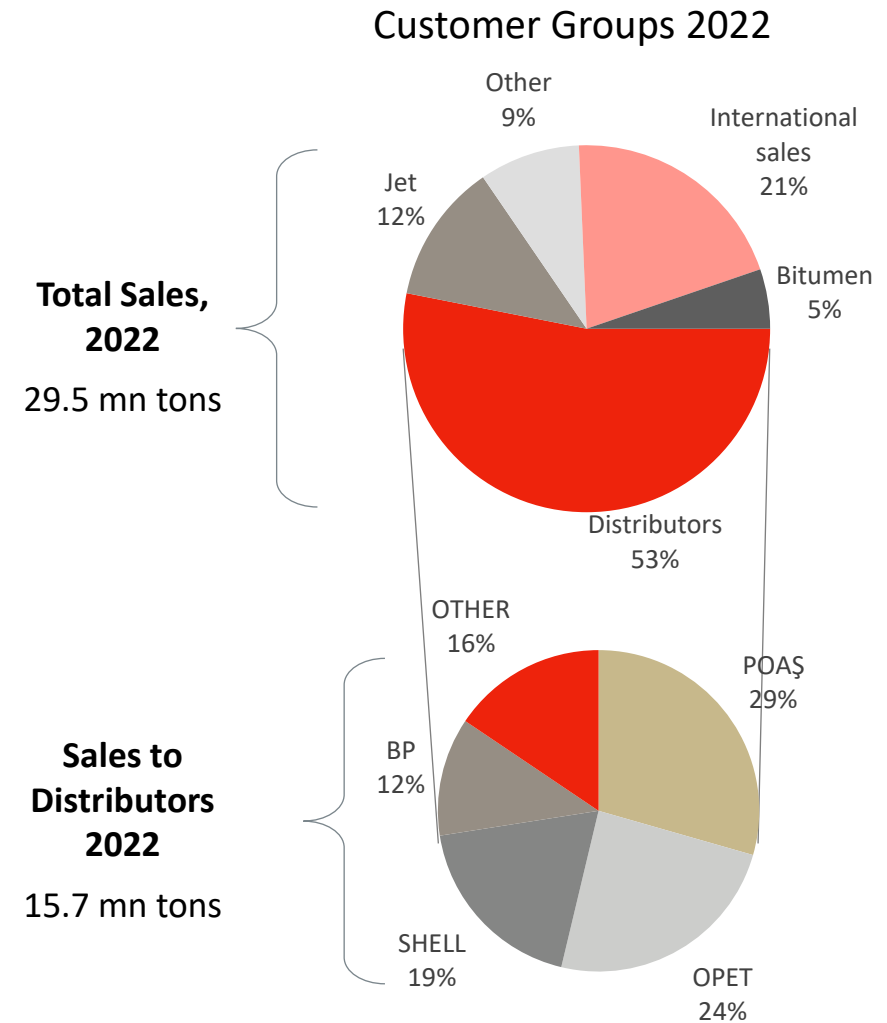
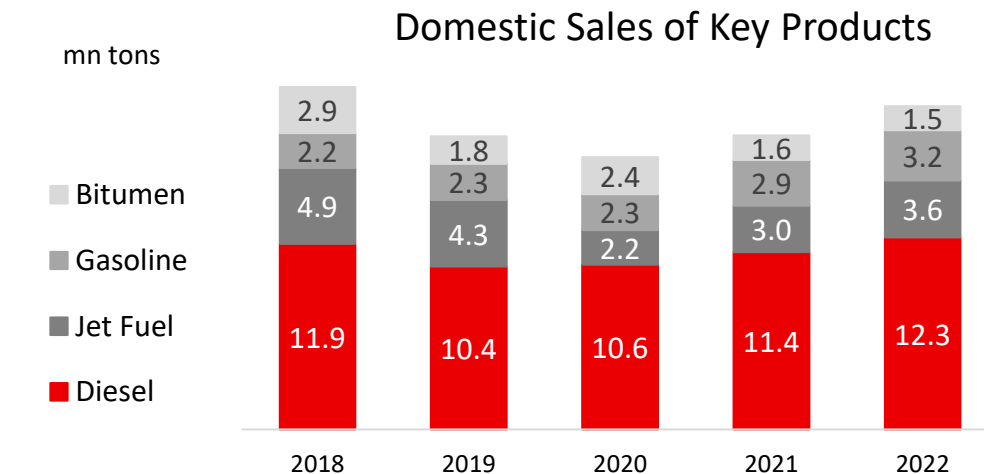
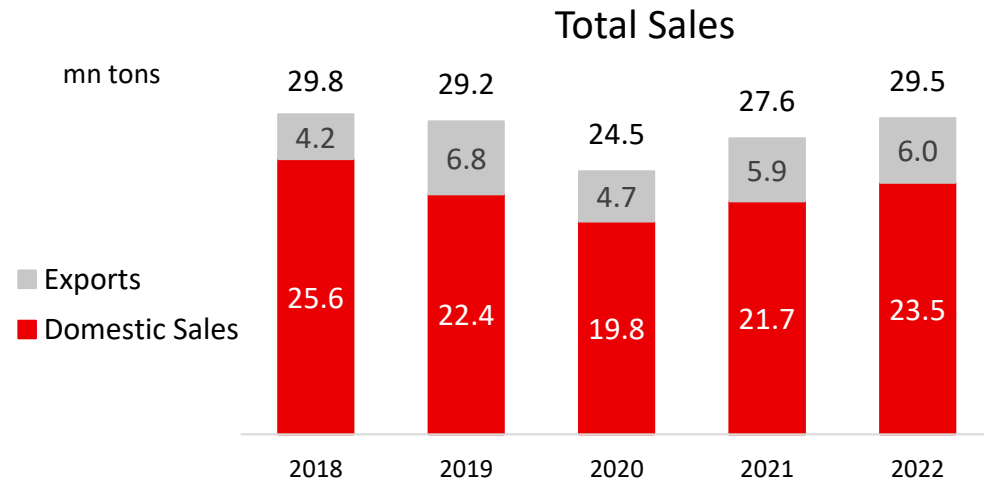
Capacity Utilization (%)



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

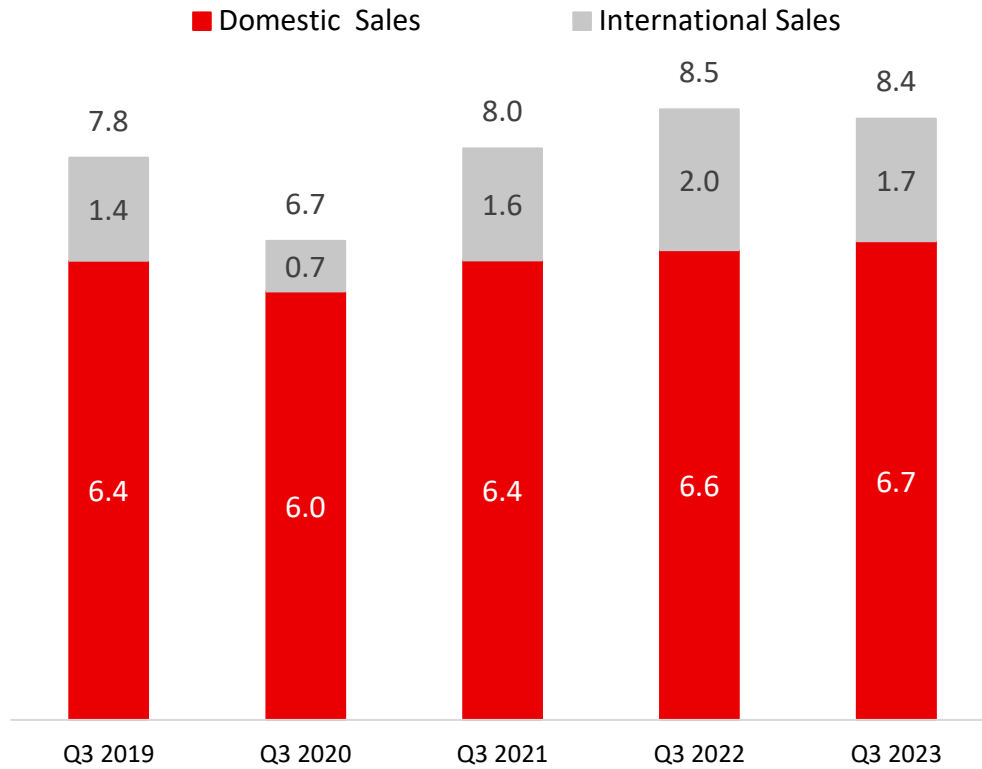
Sales

- Tüpraş generated 29.5 million tons of total sales in 2022.

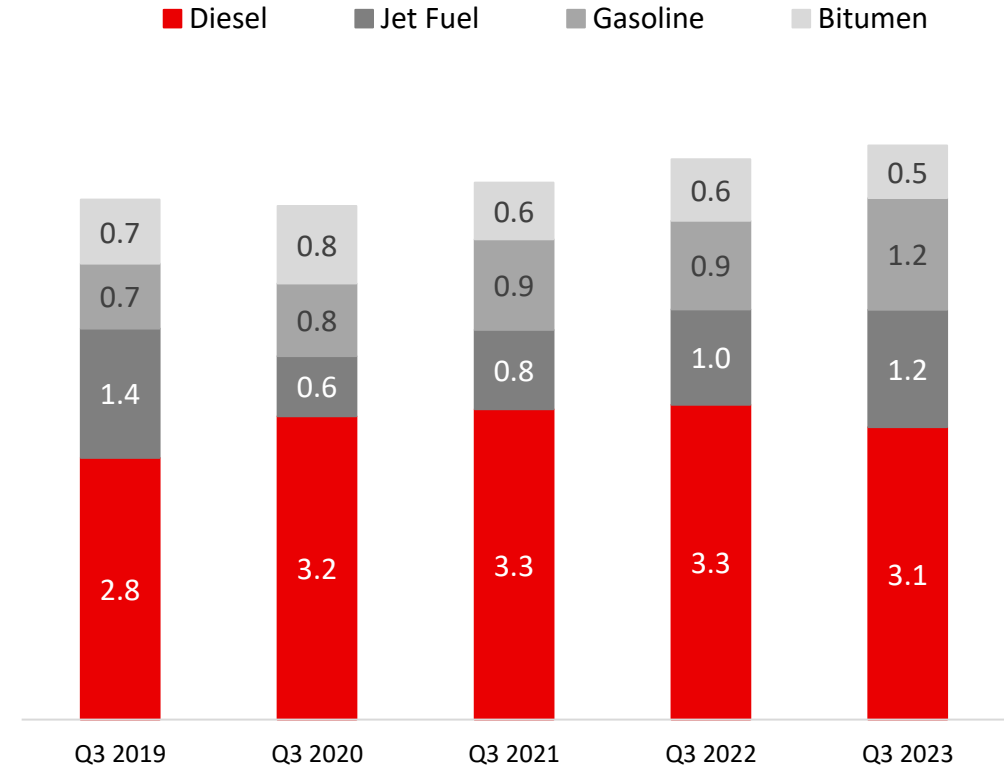


Quarterly Product Sales (Million Tons)

Total Product Sales



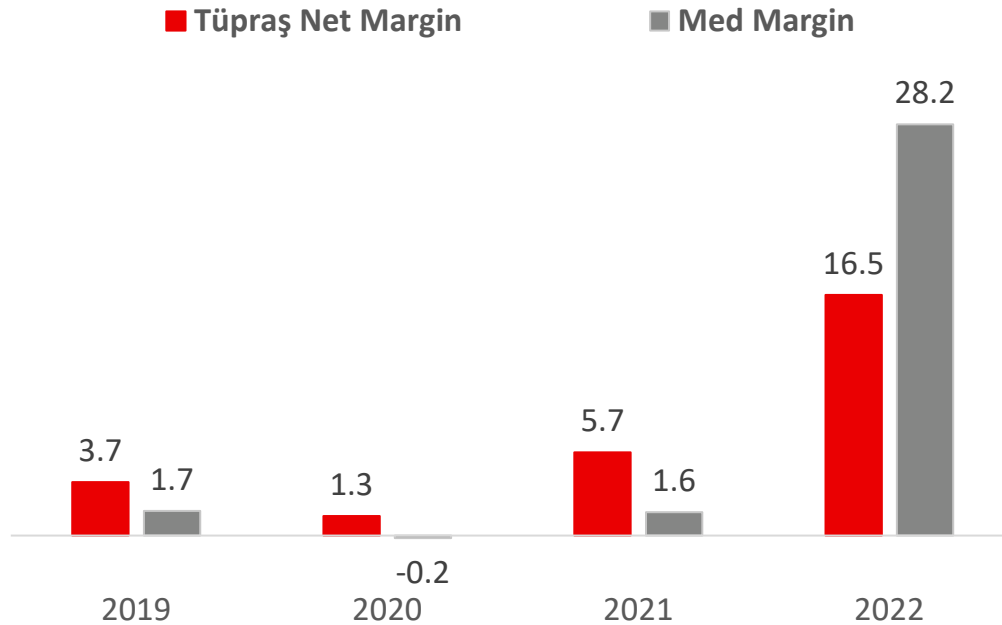
Domestic Sales of Selected Products





Financials

Tüpraş and Med Refining Margins



	(\$/bbl)	Gross Margin	Inventory Effect	Clean Gross Margin	Clean NET Margin	Net Margin	Med Margin*	Processed bbl (mn)
9M 2023		21.1	1.1	20.0	12.2	13.3	28.7	137.6
12M 2022		23.9	0.7	23.2	15.8	16.5	28.2	198.8
9M 2022		21.2	0.9	20.3	14.0	14.9	28.0	153.3
12M 2021		10.5	2.1	8.4	3.6	5.7	1.6	190.2

Premium to the benchmark Mediterranean peers' refining margin due to:

- Ability to use heavier and sour crudes with higher complexity
- Access to a wide range of cheaper sources of crude oil
- Close proximity to major suppliers reduces transport costs
- Lower cost basis and more efficient energy usage
- Ability to produce a broad range of refined products with higher value added
- Direct pipeline connections with domestic clients

* Weight of Ural crude oil is 100% for crude oil supplies in the theoretical calculation of Med Margin.

Income Statement (Million TL)

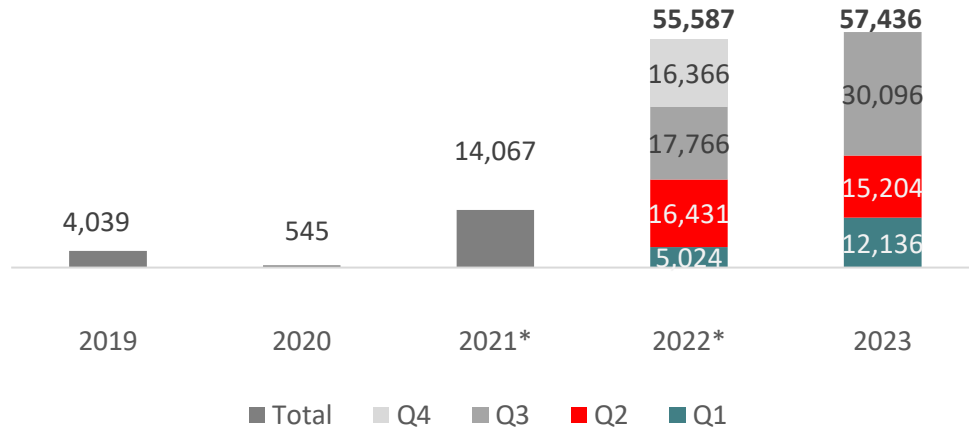
Million TL	Q3 2023	Q3 2022	%	9M 2023	9M 2022	%
Net Sales	185.137	150.609	23%	382.369	365.739	5%
COGS	-152.334	-131.111	-16%	-318.095	-322.428	1%
Gross Profit	32.803	19.498	68%	64.274	43.311	48%
Operating Expenses	-3.752	-1.989	-89%	-8.601	-5.150	-67%
Income/Loss from other operations	-2.161	-3.775	43%	-9.190	-8.836	-4%
Operating Profit	26.890	13.734	96%	46.483	29.325	59%
Inc./Loss from Equity pick ups	1.007	310	225%	1.545	677	128%
Operating Profit Before Fin. Income/Loss	27.897	14.043	99%	48.028	30.001	60%
Financial Income /Expense	-756	-796	5%	-3.664	-4.242	14%
Profit Before Tax	27.141	13.247	105%	44.365	25.759	72%
Net Profit (excluding minority interest)	21.306	11.554	84%	35.272	23.456	50%
EBITDA *(mn. TL)	30.096	17.766	69%	57.436	39.221	46%
Inventory Gain/Loss (mn. TL)	3.342	416	703%	7.975	7.450	7%
EBITDA* (mn. TL) CCS	26.753	17.350	54%	49.460	31.771	56%

Income Statement (Million TL)

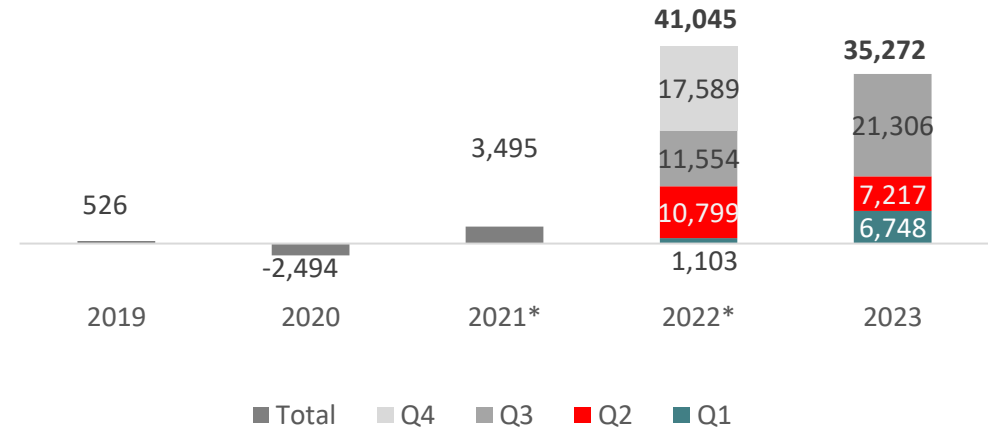
Million TL(**)	2022	2021	%
Net Sales	481,765	152,492	216%
COGS	-418,988	-136,632	-207%
Gross Profit	62,777	15,860	296%
Operating Expenses	-8,235	-3,318	-148%
Income/Loss from other operations	-8,935	-11,766	24%
Operating Profit	45,607	777	5773%
Inc./Loss from Equity pick ups	365	701	-48%
Operating Profit Before Fin. Income/Loss	45,972	1,477	3012%
Financial Income /Expense	-6,096	881	-792%
Profit Before Tax	39,876	2,358	1591%
Net Profit (excluding minority interest)	41,045	3,495	1074%
EBITDA* (mn. TL)	55,587	14,067	295%
Inventory Gain/Loss (mn. TL)	7,274	8,659	-16%
EBITDA* (mn. TL) CCS	48,313	5,409	793%

Financial Highlights

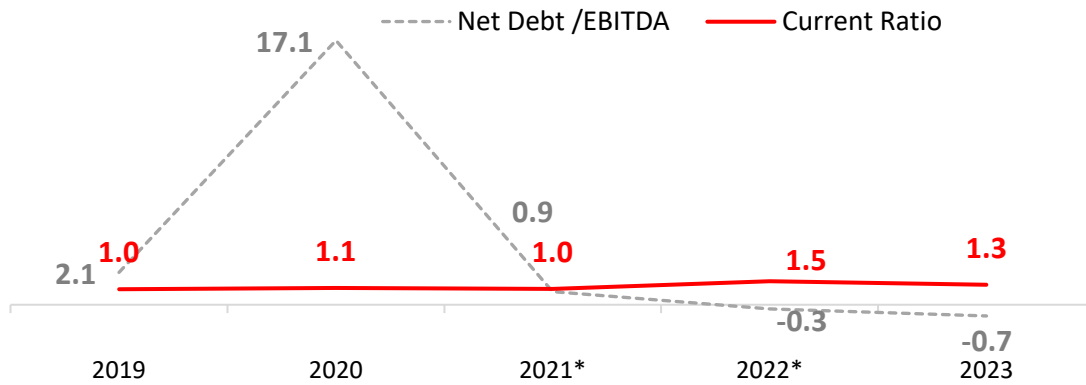
EBITDA (mn TL)



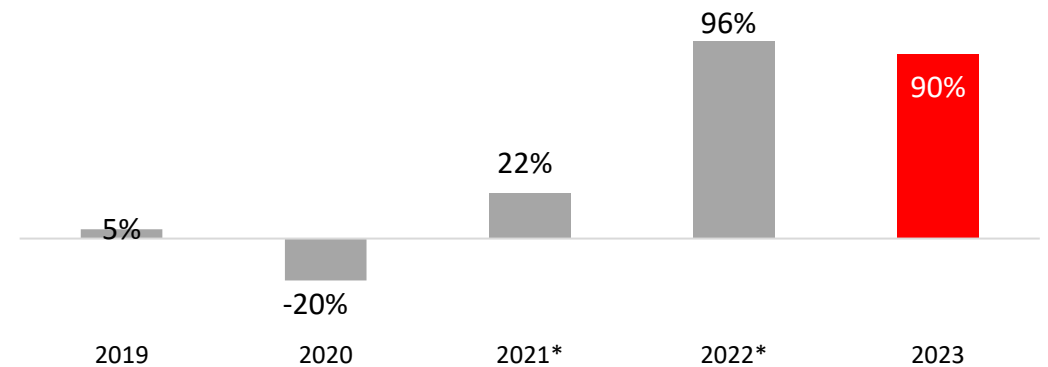
Net Income¹ (mn TL)



Current Ratio & Net Debt / EBITDA

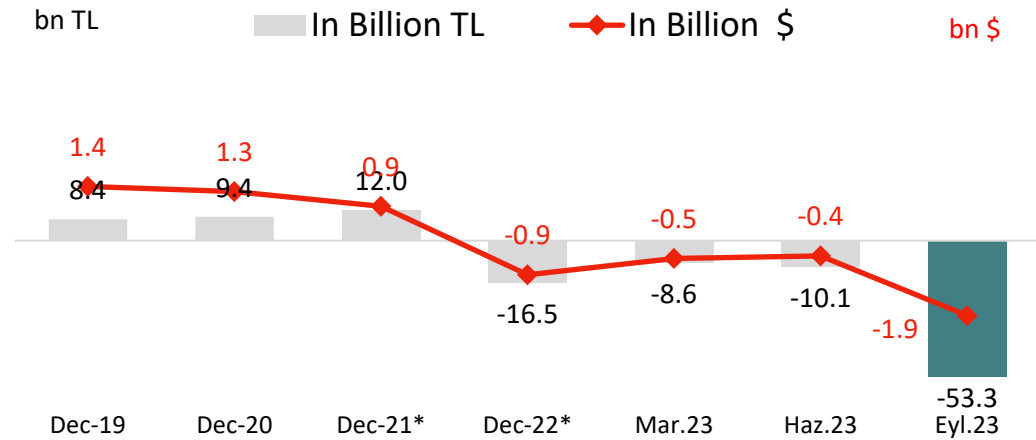


Return on Average Equity (%)

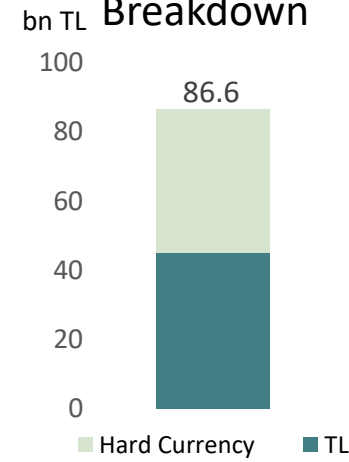


Balance Sheet Analysis

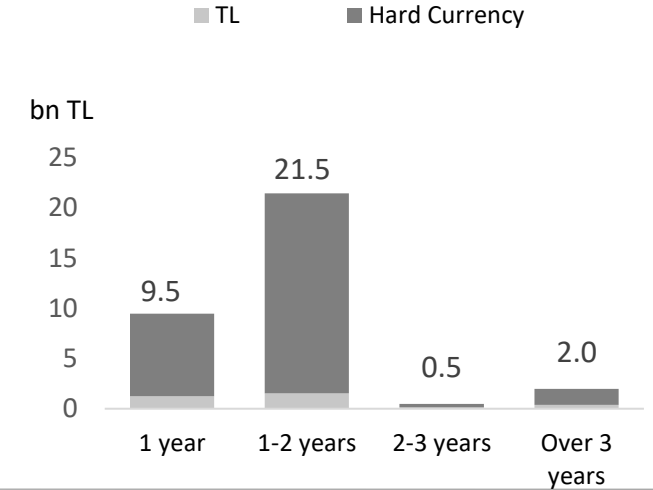
Net Debt/Cash



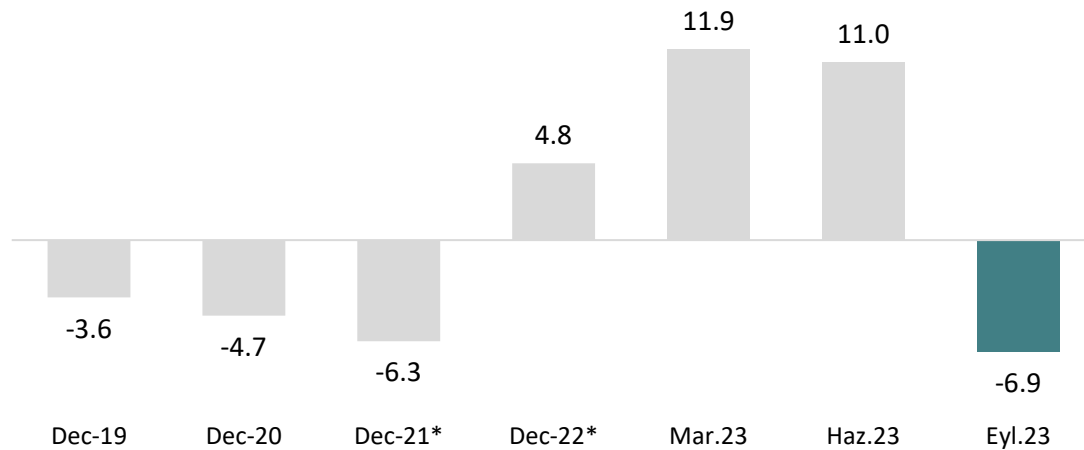
Cash Currency Breakdown



Redemption Schedule



Working Capital Requirement (Billion TL)



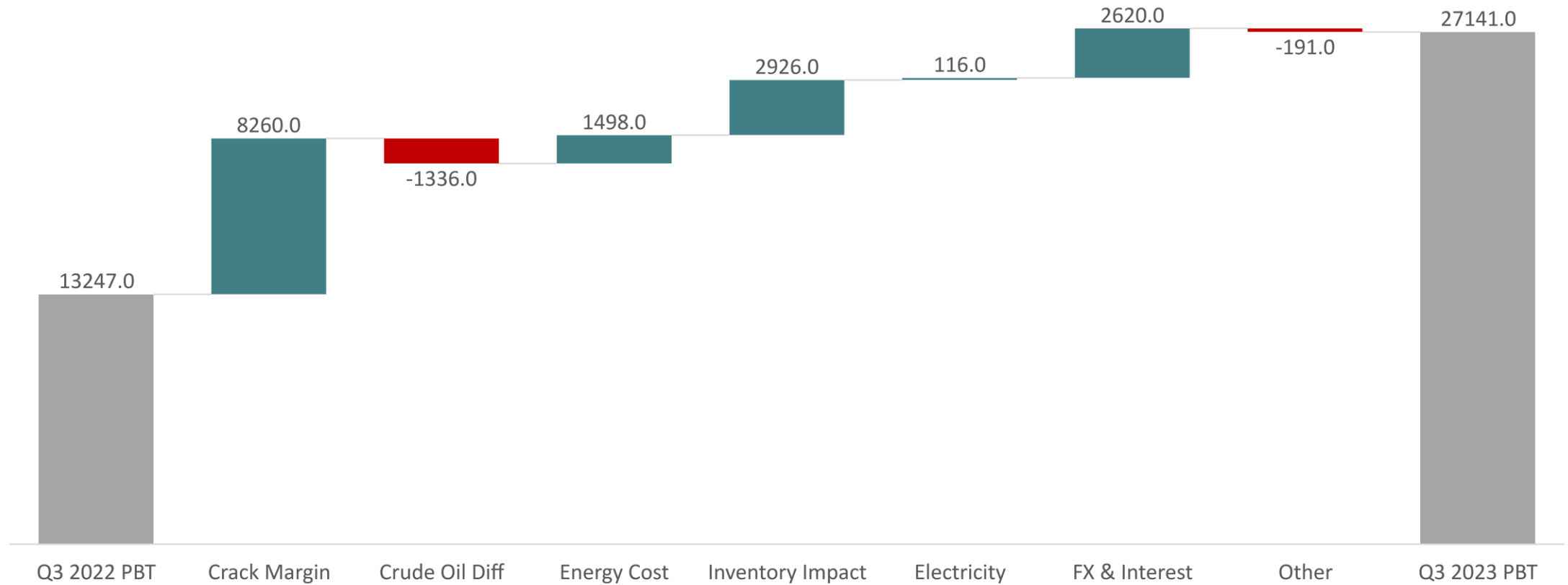
Financial Management

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

Quarterly Profit Before Tax Bridge

Strong cracks, higher inventory and positive net fx & interest impact boosted PBT, while differentials were relatively weak

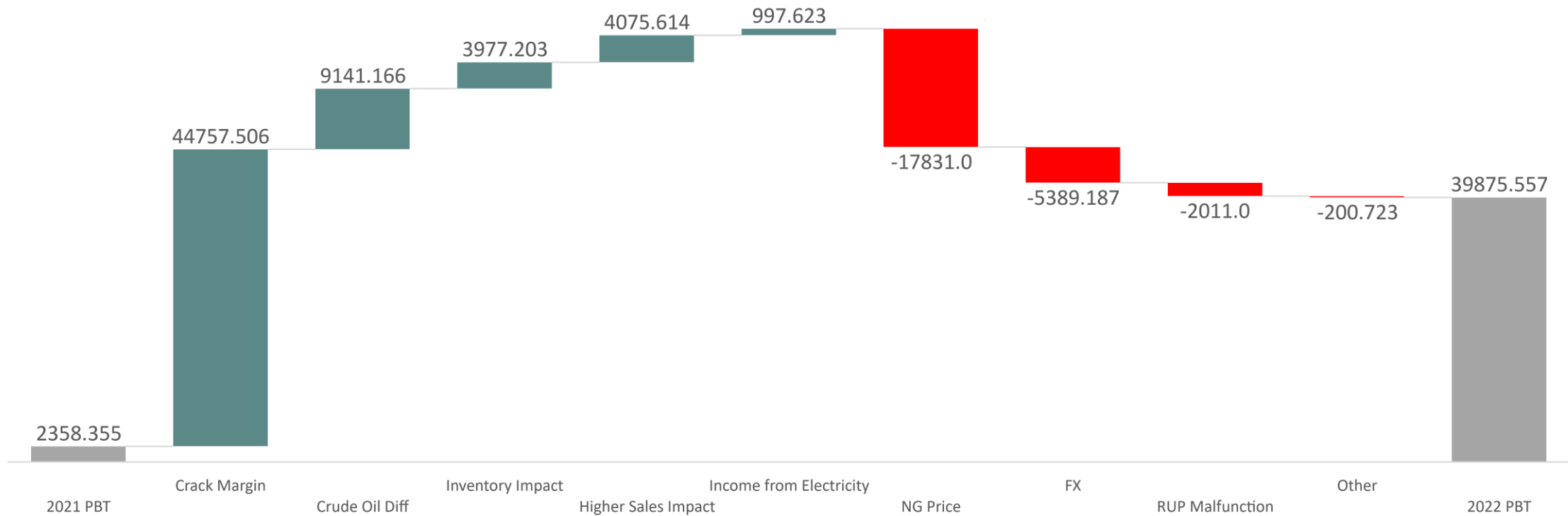
Million TL



Profit Before Tax Bridge (2021 – 2022)

2022 PBT was positively impacted by stronger cracks and wider differential spreads.

Million TL



Tüpraş Net Refining Margin **11\$/bbl -12\$/bbl**

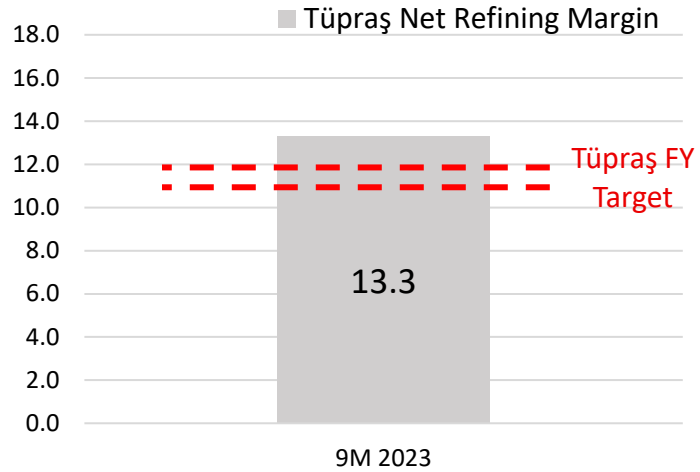
- 24-25 mn tons production, 29-30 mn tons sales and 85 - 90% capacity utilization

Consolidated Capex **~350 million \$**

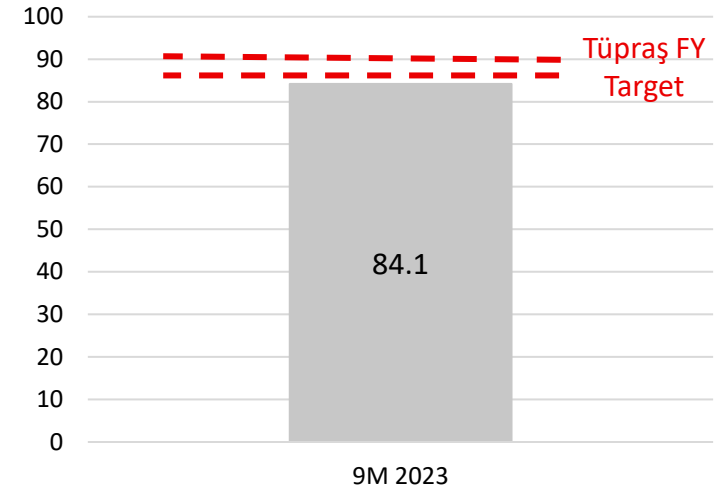
- ~60% of capex for sustainability focused energy efficiency and environmental projects

9M 2023 Results

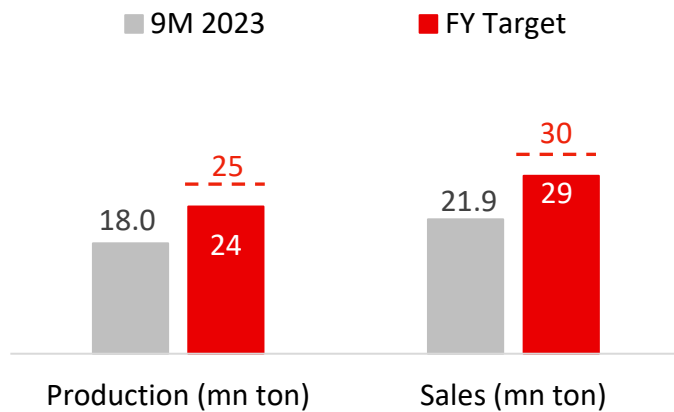
Refining Margins (\$/bbl)



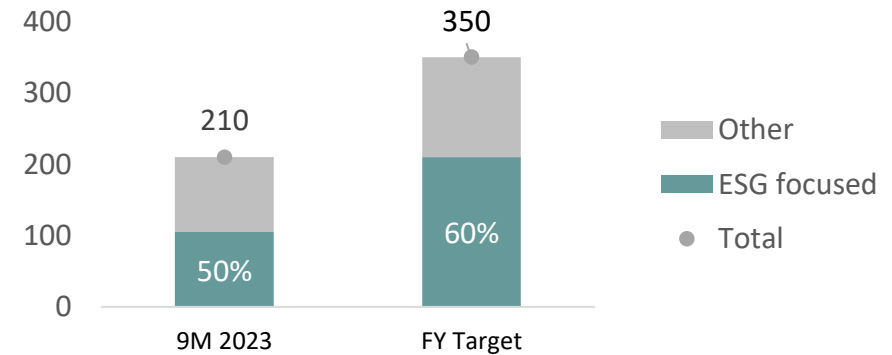
Capacity Utilization (%)



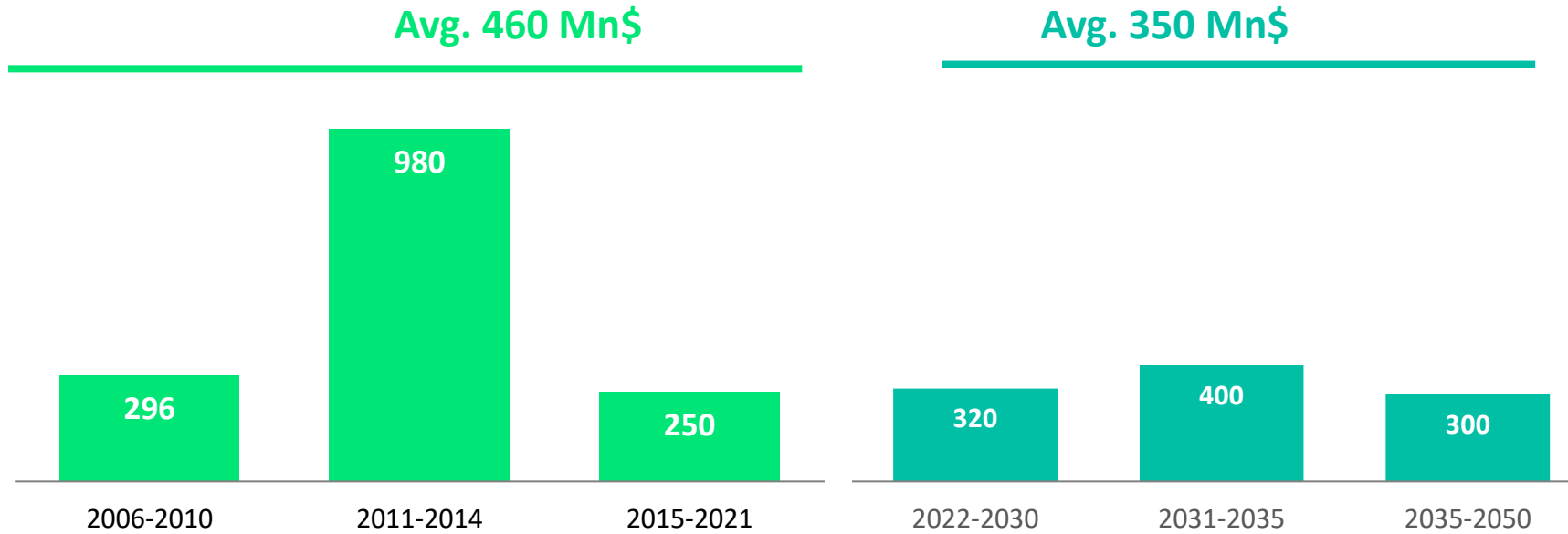
Operational



Total Capex (mn \$)(*)




Investments (Million \$)



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.

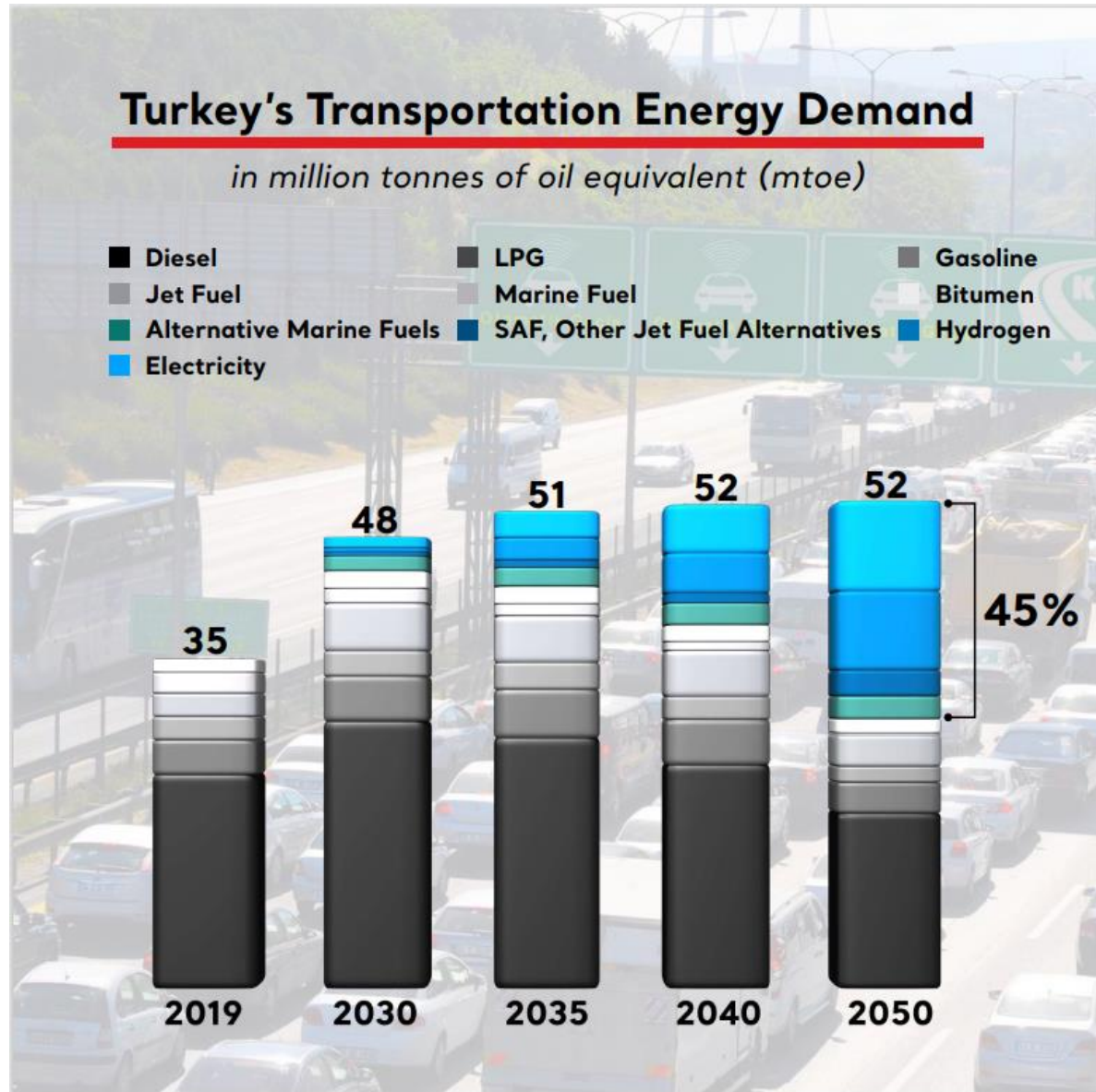
Crack Margin Hedging Policy:

- 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 H₂**, 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

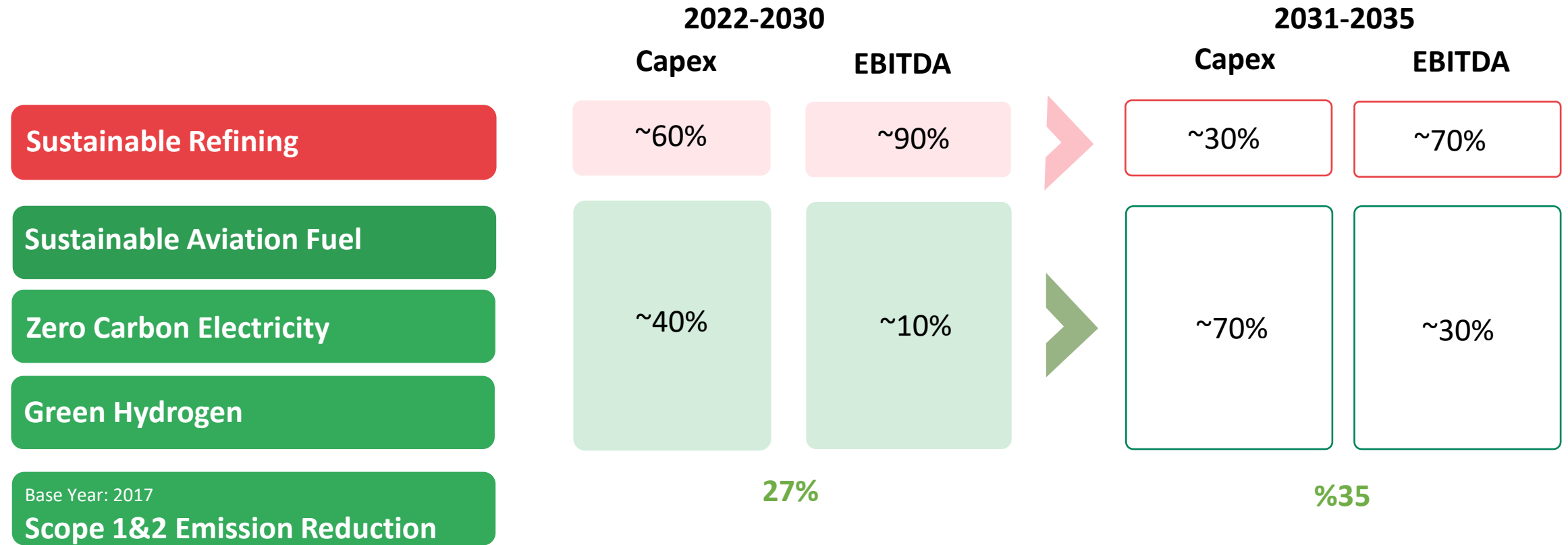


H₂ to enter a **rapid growth phase** from 2030



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 H₂

- Ensure affordable **green H₂ production, capturing electrification demand**
- **Primarily supply zero carbon electricity for H₂ 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

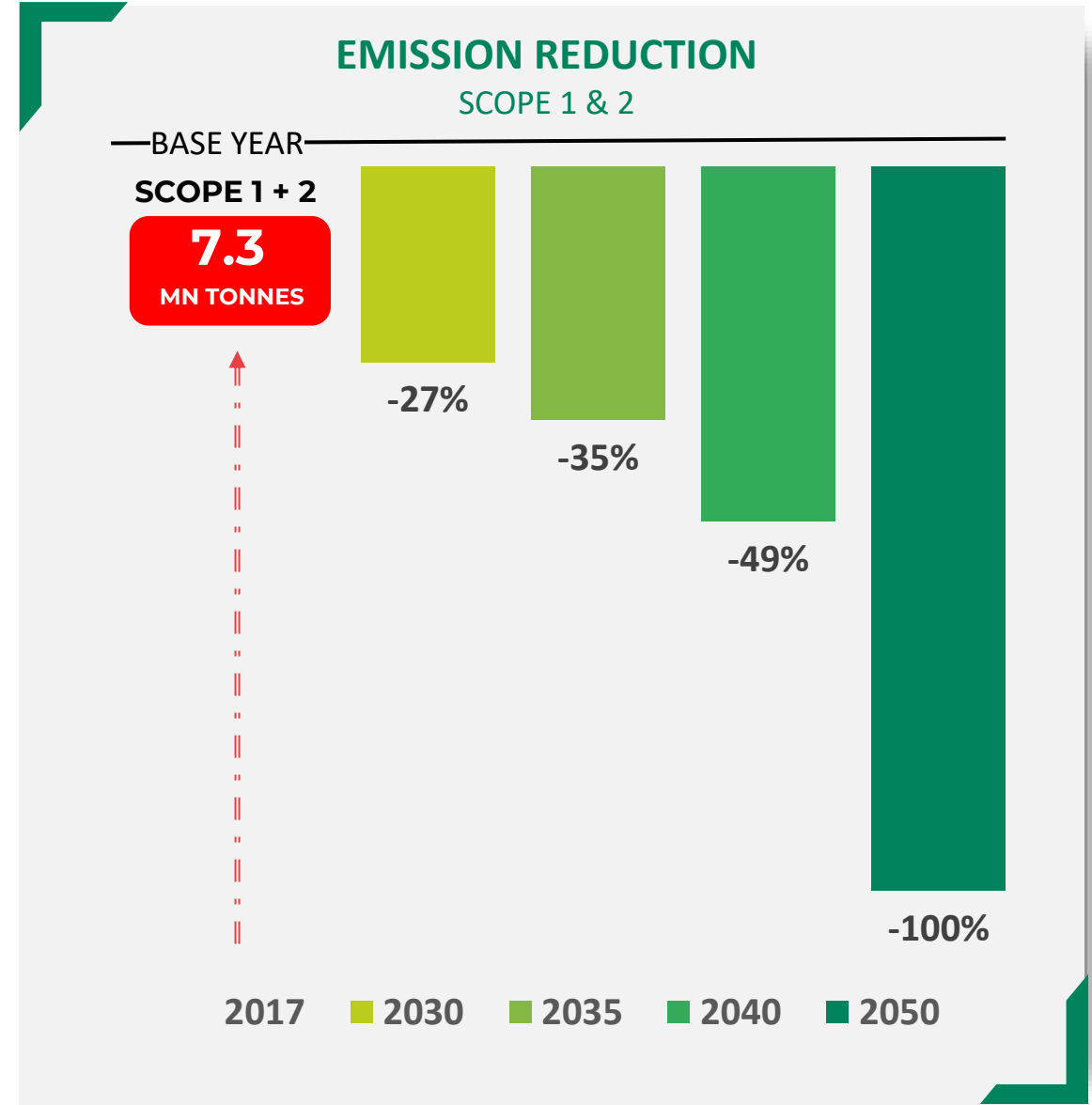
Reducing Refining Emissions

- Capture changing market for **land transportation, reduce refining emissions.**
- **Reduce Scope 1-2 emissions** of refineries. Followed by **H₂ 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.

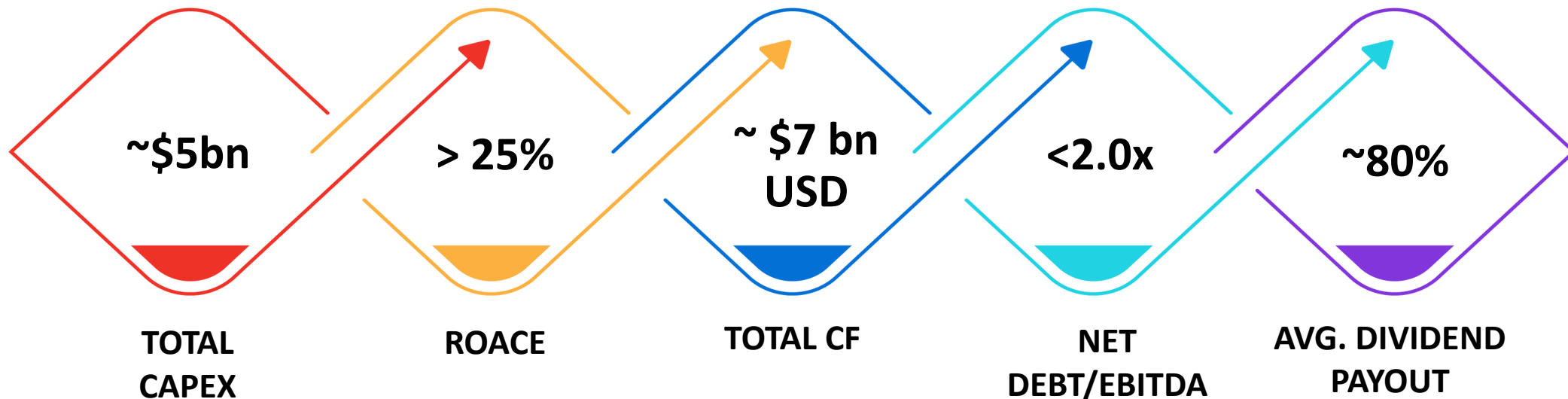
Will **eliminate our scope 1 & 2 emissions by 2050** while executing our plan and achieving these results.

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

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

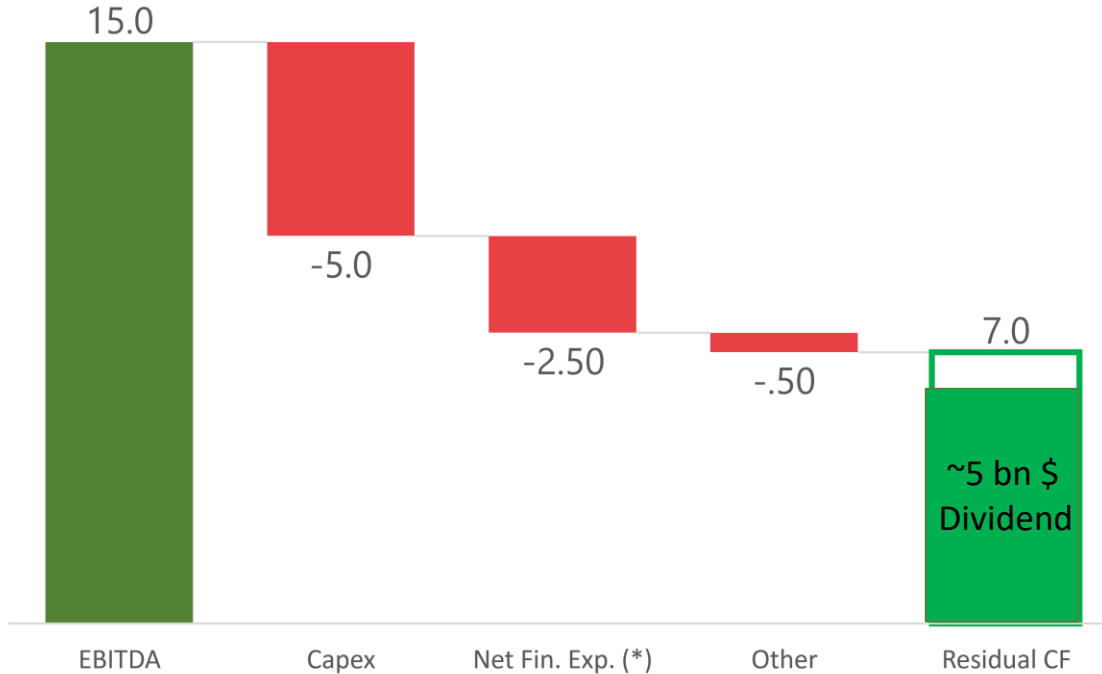
With ample CF, **Net Debt / EBITDA** will be below **<2.0x**

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



Strategic Transition Plan - Financials

Cumulative Cash Flow Bridge (\$ bn)

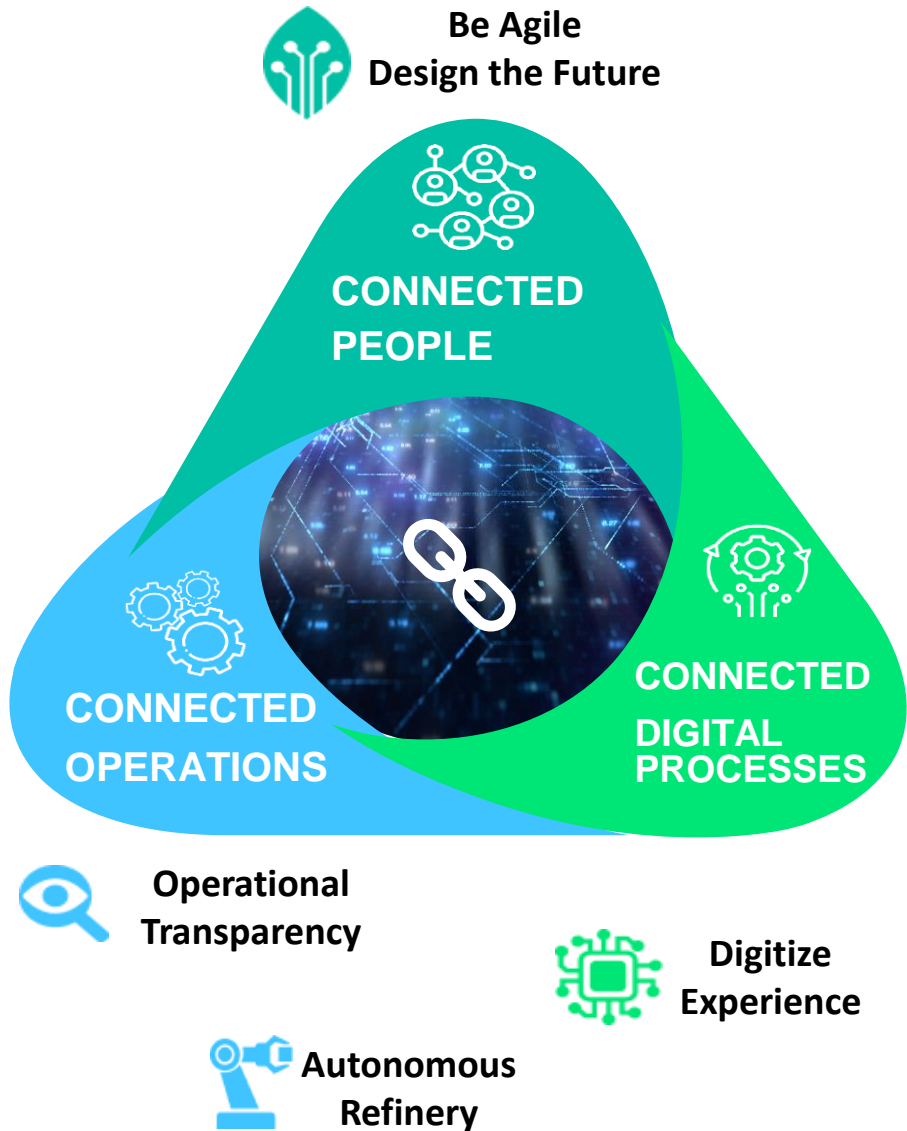


Sound Financial Plan

- 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

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

Digital Transformation



600 MN LINES OF DAILY DATA FROM 150K SENSORS



DATA ANALYTICS CENTERS IN 2 UNIVERSITIES



«E-PERMITS TO WORK» AT ALL LOCATIONS BY 2023



ARTIFICIAL INTELLIGENCE MODELS



USE OF ROBOTIC TECHNOLOGIES



PROACTIVE CYBER SECURITY VULNERABILITY MANAGEMENT



«PIONEER IN DIGITALIZATION» – PLATIN GLOBAL 100 INDEX

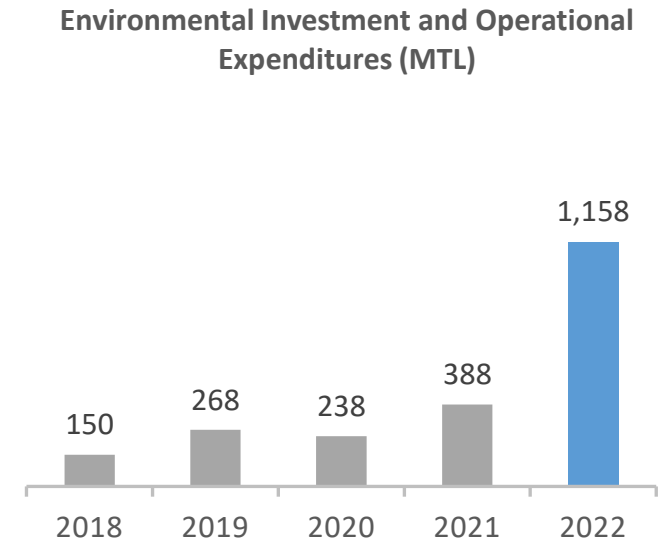
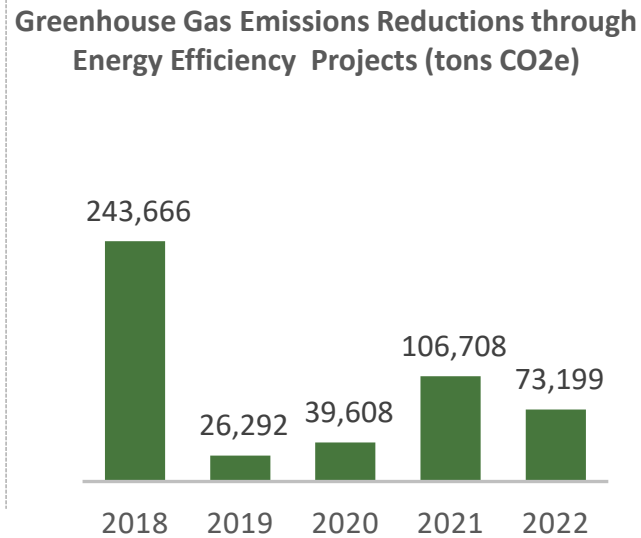
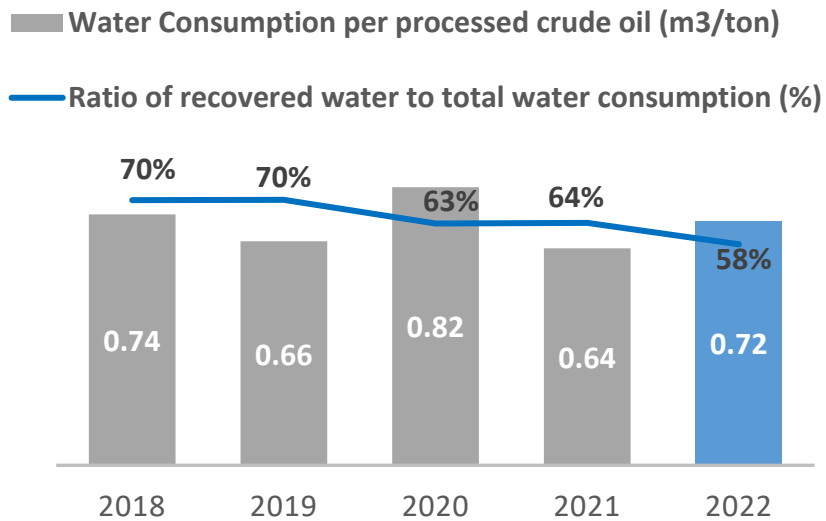
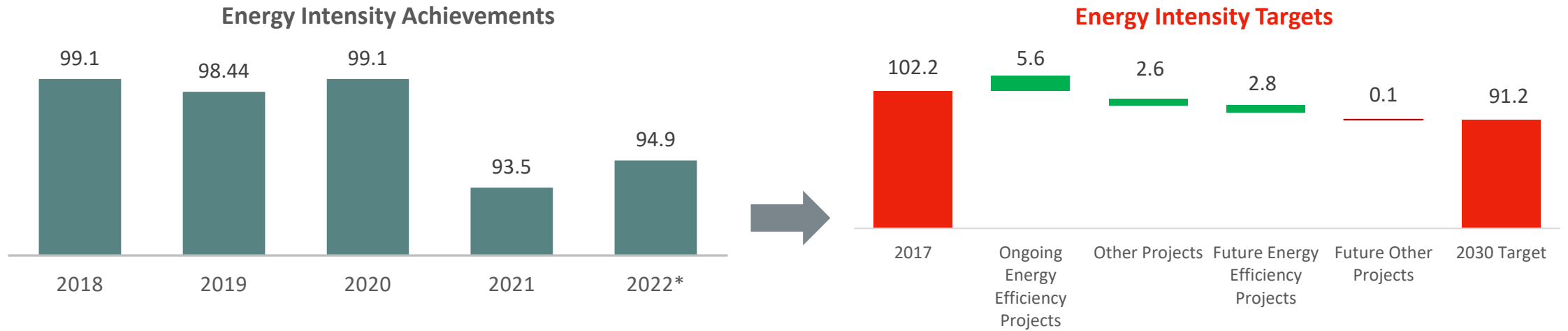


«SMART HARD HAT» - DIGITALIZATION AWARD BY TISK



ESG

Tüpraş's Environmental Highlights



*Energy Intensity increased in 2022 with higher use of alternative fuels due to the supply problems in natural gas and significant increase in natural gas prices

Tüpraş's Social & Governance Highlights

Strong Policies have been effectively implemented for years



Corporate Governance Rating **9.65**

Board of Directors' Composition

11 members
Four members are independent

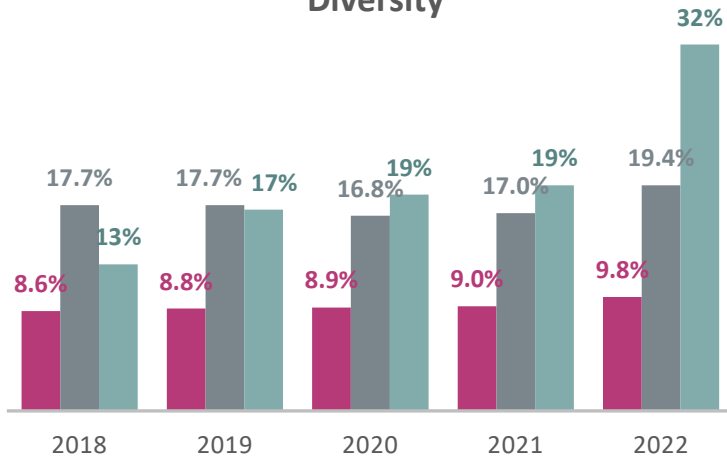
Committees under BoD

- Corporate Governance
- Risk Management
- Audit
- Executive Ethics

Health & Safety and Diversity are the Key Priorities

- Female Share in Total Employees
- Female Representation in Senior and Mid-Level Management
- Female Share in Recruitment

Diversity



Targets

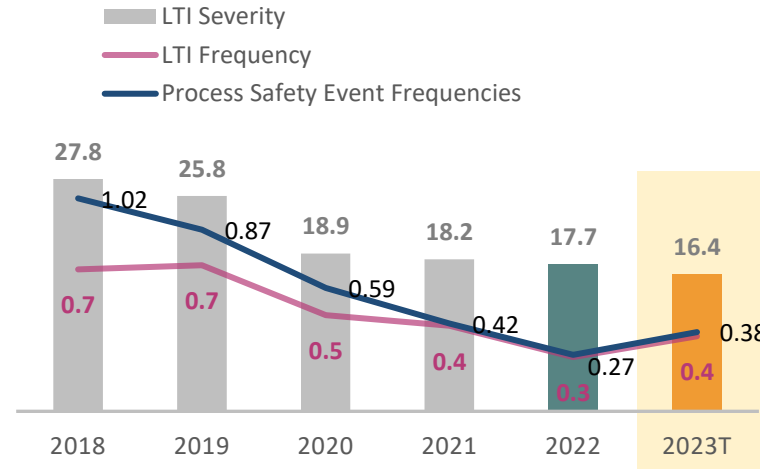
Female Representation in the Board of Directors in the next five years

25%

Targeted Rate of Women in New Recruitments

50%

Health & Safety



Targets	2024-2025	2030
Process Safety Event Freq.	0.30	0.25
LTI Frequency	0.30	0.15
LTI Severity	10.0	5.0

Tüpraş is taking place in these sustainability indices



FTSE4Good





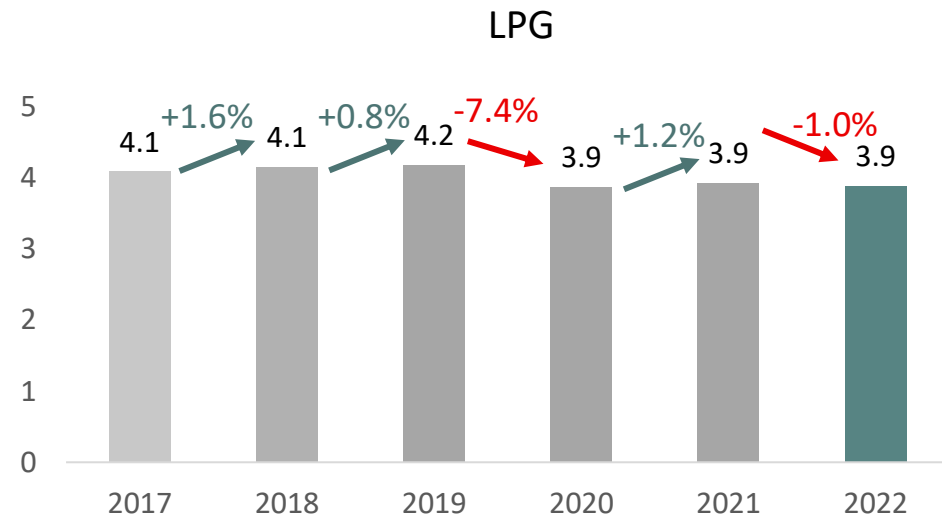
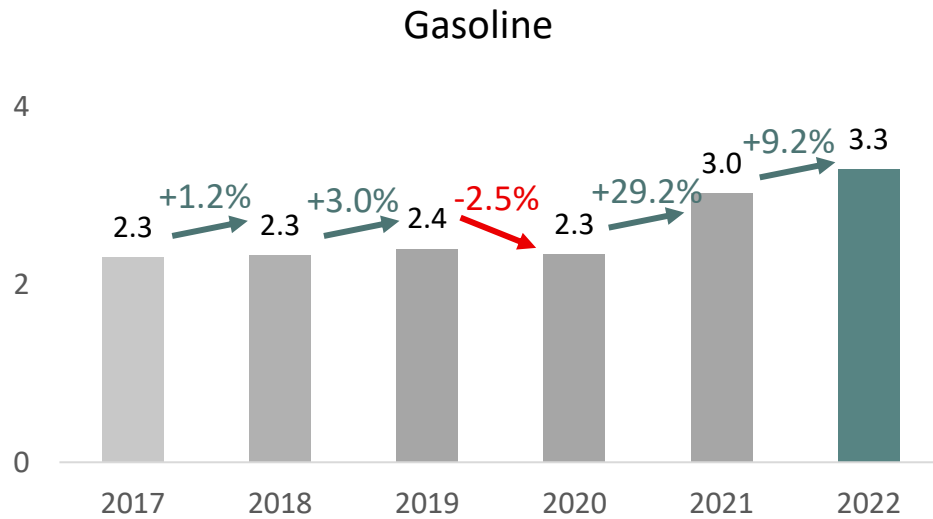
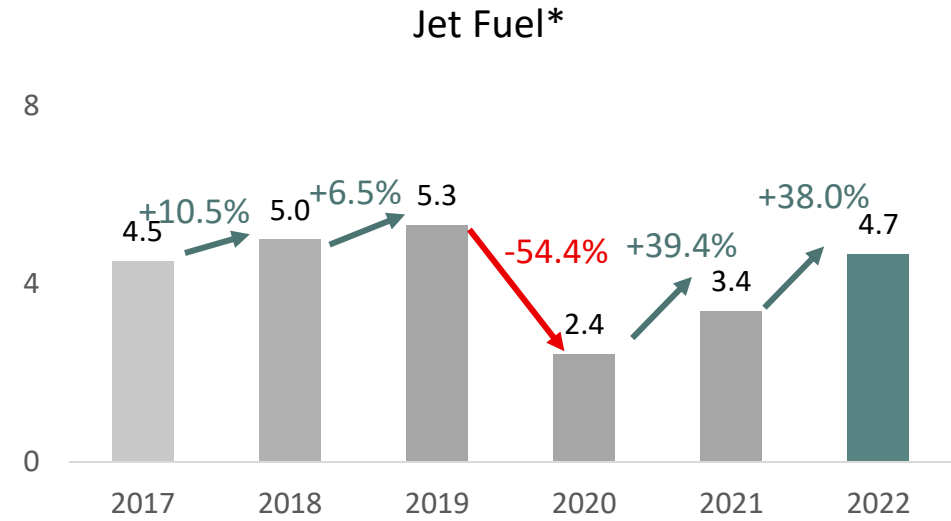
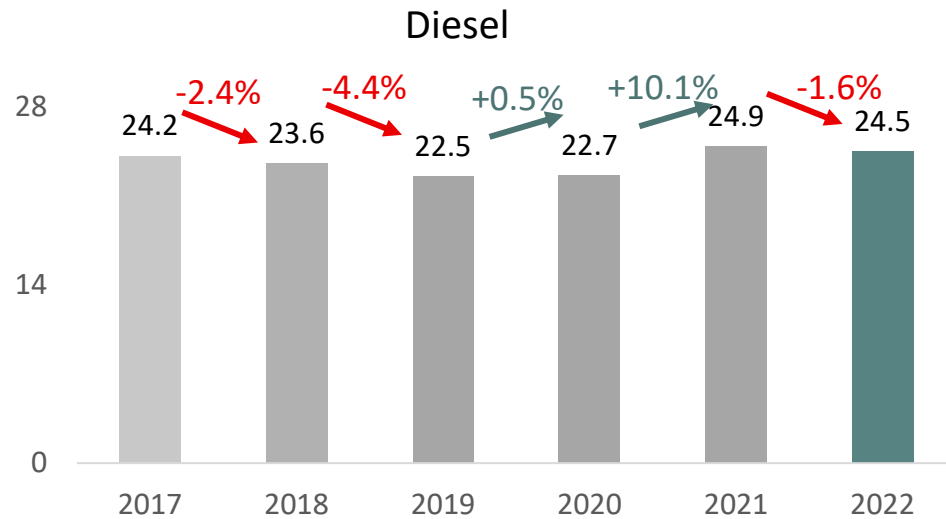
Appendix

2023 Refinery Maintenance Schedule

Refinery	Unit	Starting Quarter	Duration (weeks)	Purpose	Planned
Batman	Crude Oil & Vacuum	Q1	7	Seasonal	Completed
	Crude Oil & Vacuum	Q4	9		Planned
İzmir	FCC	Q1	7	Revamp	Completed
	Crude Oil, Vacuum, CCR, Isom.	Q1	9		Completed
	Lube Complex	Q1	9		Completed
	Crude Oil , Vacuum	Q4	5	Periodic Maintenance	Postponed
	HYC	Q4	6		Postponed
İzmit	Crude Oil & Vacuum	Q1	7	Periodic Maintenance	Completed
	Desulphurizer	Q1	18		Completed
	CCR	Q1	9		Completed
	FCC	Q2	11	Opportunity Maintenance	Completed
Kırıkkale	Battery Shut Down	Q1	7	Periodic Maintenance	Completed

Turkish Market Fuel Consumption 2017-2022

Million
Tons



Source: Tüpraş and EMRA
* Transit flight consumption included

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
- Investments continue to reach to 13 mn tons of capacity

* Source: EMRA

Turkish Market Structure (mn tons)

Turkey Demand	Tüpraş	STAR	Total	Turkish Market Demand*	Balance
LPG	1.1	0.3	1.4	3.9	-2.5
Petchem F.	0.2	2.6	2.8		
Gasoline	6.1		6.1	3.3	2.8
Jet Fuel	5.2	1.6	6.8	4.7	2.1
Diesel	10.7	4.8	15.2	24.5	-9.3
Fuel Oil	1.8		1.8	0.3	1.5
Bitumen	3.1		3.1		
Pet coke	0.8	0.7	1.5		
Total	~30	~10	~40		

Competition - Regional Competition

- Tüpraş competes with 71 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 ~7.8mbd

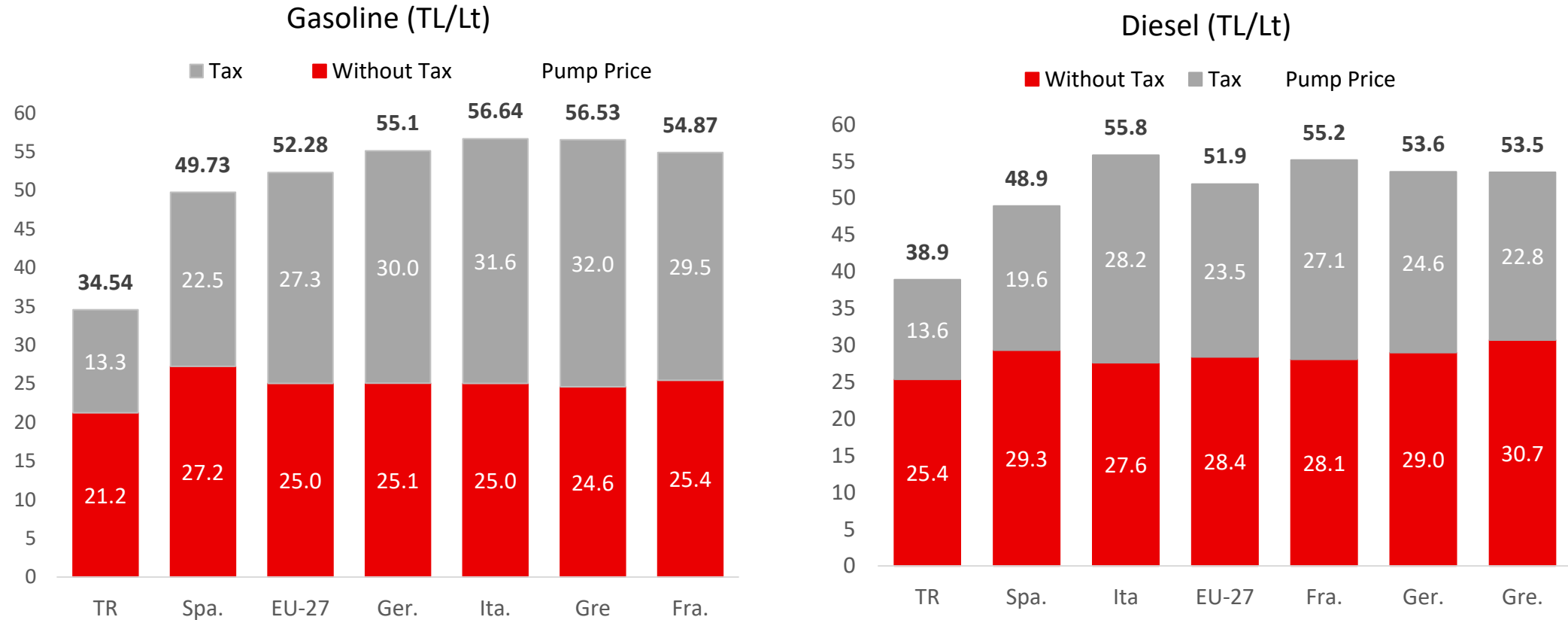
Black Sea



17 Refineries ~1.8mbd

European Pump Price Comparison

Turkish fuel prices are highly competitive with other European countries.



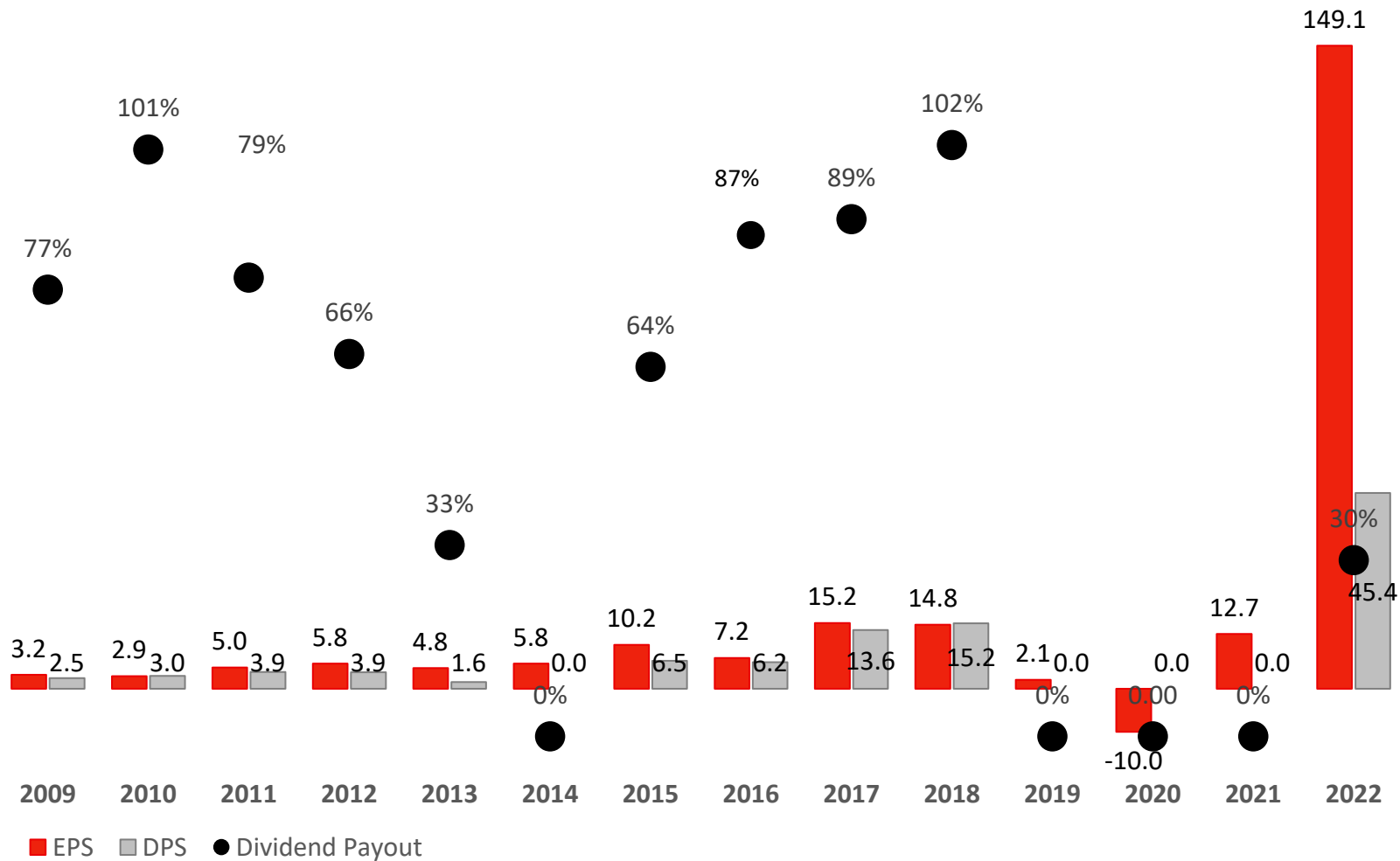
Prices of Europe and Turkey, as of October 31, 2023

Tüpraş Balance Sheet (Million TL)

	30.09.2023	31.12.2022*	Diff.	Diff. (%)
Current Assets	196.666	119.711	76.955	64
Cash & C. Equivalents	86.621	49.770	36.850	74
Trade Receivables	42.096	21.418	20.679	97
Derivatives	1.958	3.597	-1.639	-46
Inventories	52.182	36.046	16.136	45
Pre-paid expenses	1.513	749	764	102
Other Current Assets	12.295	8.131	4.164	51
Long Term Assets	54.433	49.182	5.252	11
Financial Assets & Subsidiaries	4.590	3.029	1.561	52
Tangible & Intangible Fixed Assets	37.270	33.680	3.589	11
Derivatives	62	57	5	8
Pre-paid expenses	1.264	618	646	104
Deferred Tax	7.665	9.196	-1.530	-17
Other Longterm Assets	3.583	2.601	982	38
Total Assets	251.099	168.892	82.207	49
Short Term Liabilities	152.675	78.895	73.780	94
Financial Loans	9.470	11.994	-2.525	-21
Trade Payables	101.225	52.699	48.526	92
Derivatives	5.228	995	4.233	426
Provisions	1.816	531	1.286	242
Other ST Liabilities	34.936	12.677	22.259	176
Long Term Liabilities	25.859	22.811	3.048	13
Financial Loans	23.885	21.274	2.611	12
Payables & Provisions	1.468	1.190	278	23
Derivatives	428	298	130	44
Other LT Liabilities	77	48	29	60
Total equity attributable to equity holders of the parent	71.854	66.743	5.111	8
Minority Interests	711	442	269	61
Total Liabilities & Equity	251.099	168.892	82.207	49

Dividend (TL)

Avg. Payout Ratio: 90%*



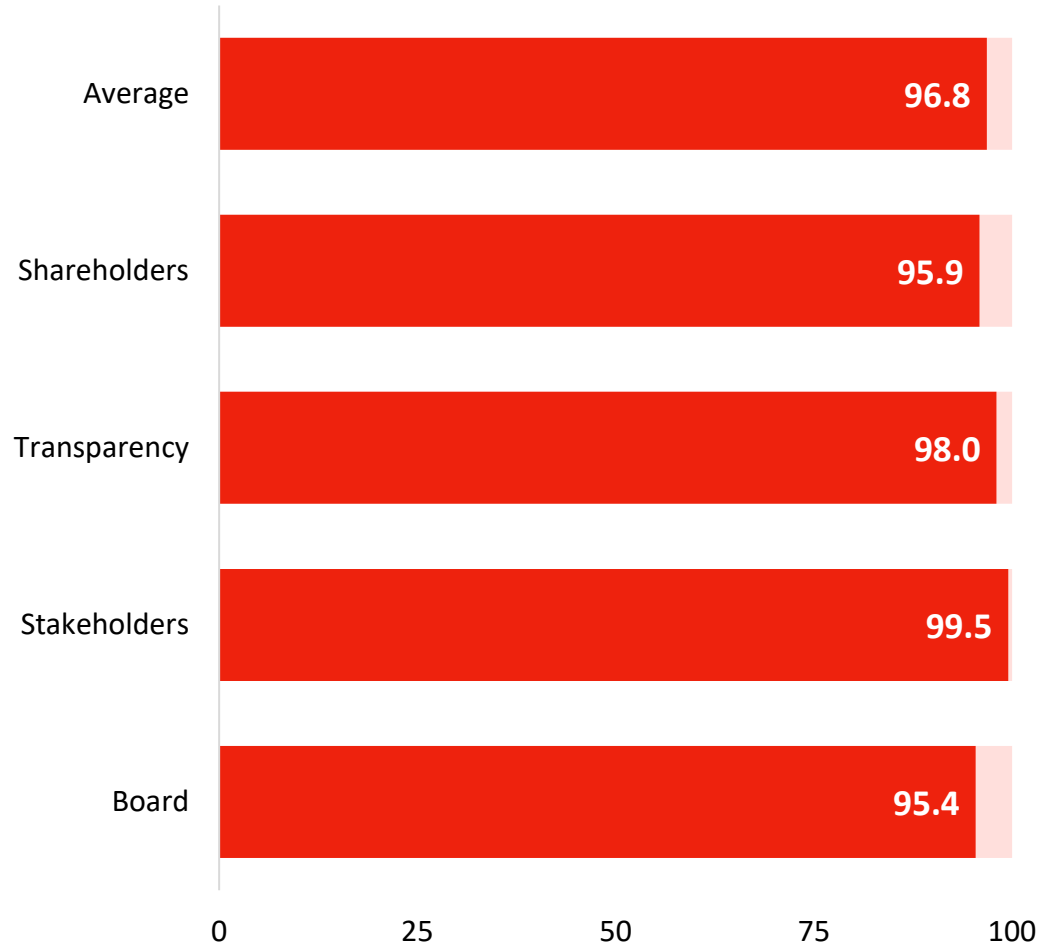
Strategic Transition Dividend Plan

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

*2009-2018 dividend payout ratio, which is calculated according to distributable net income based on statutory accounts

Tüpraş - Ratings

Tüpraş BIST Corporate Governance Rating Score

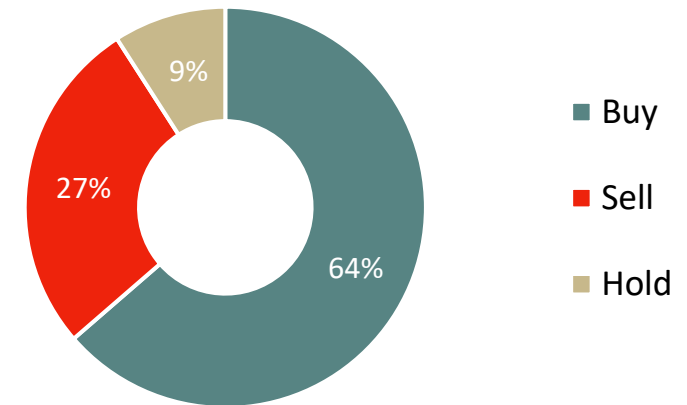


Source: SAHA Corporate Governance and Rating Services Inc. (November 2023)

Credit Rating Scores

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

Analyst Recommendations

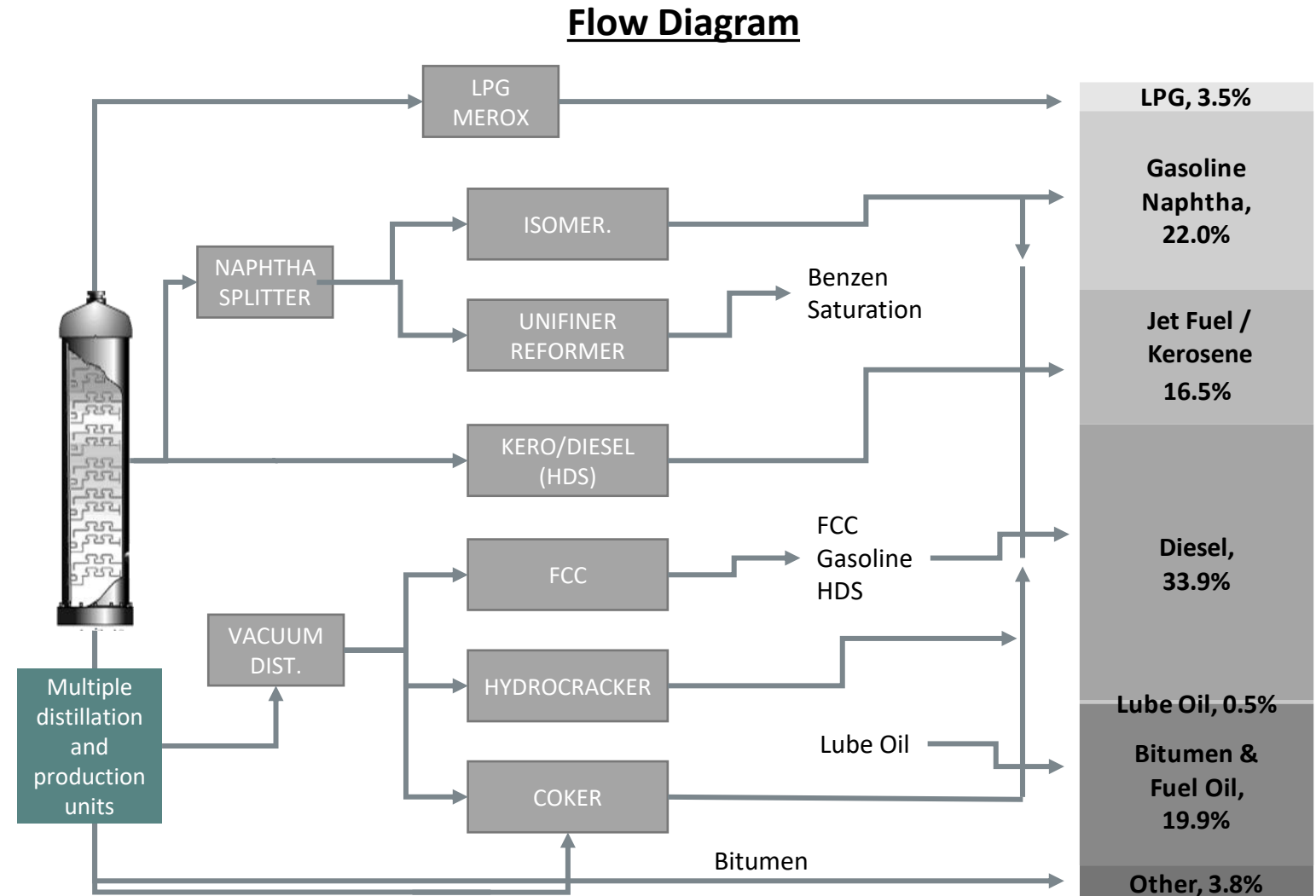


Source: Bloomberg*
*data as of Nov'23

Tüpraş Production Flow and Yield Breakdown

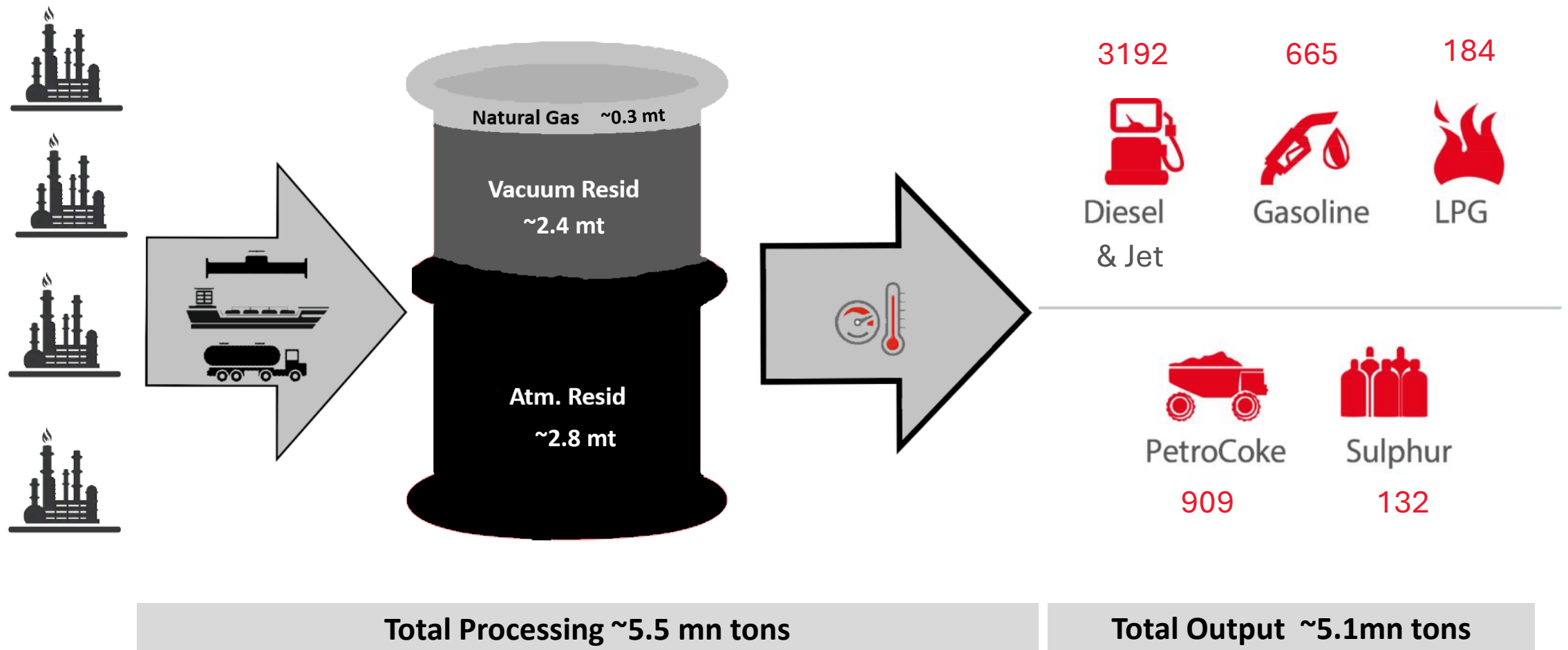
- Tüpraş has 30 million tons of production capacity
- Tüpraş operates 4 refineries with an integrated system optimization program

Key Units	# of Units	Capacity (m ³ /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	

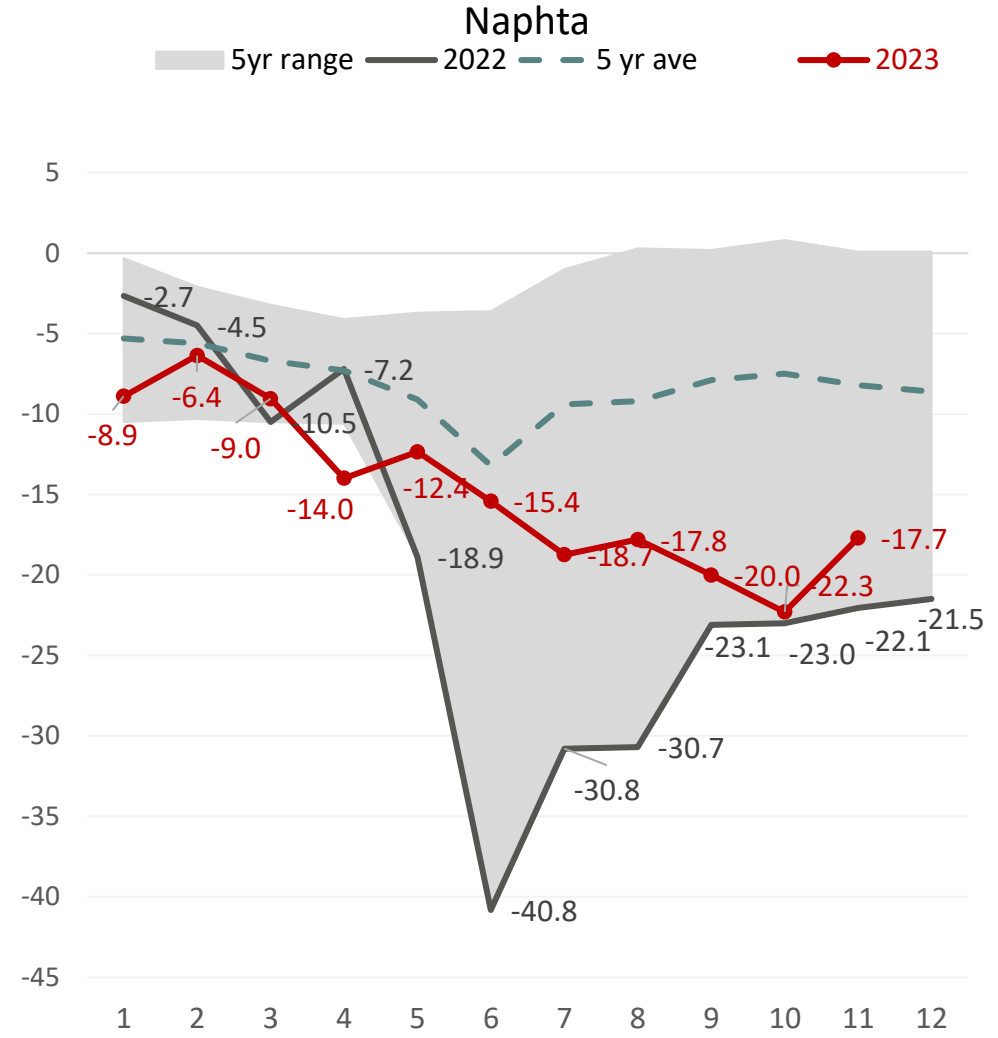
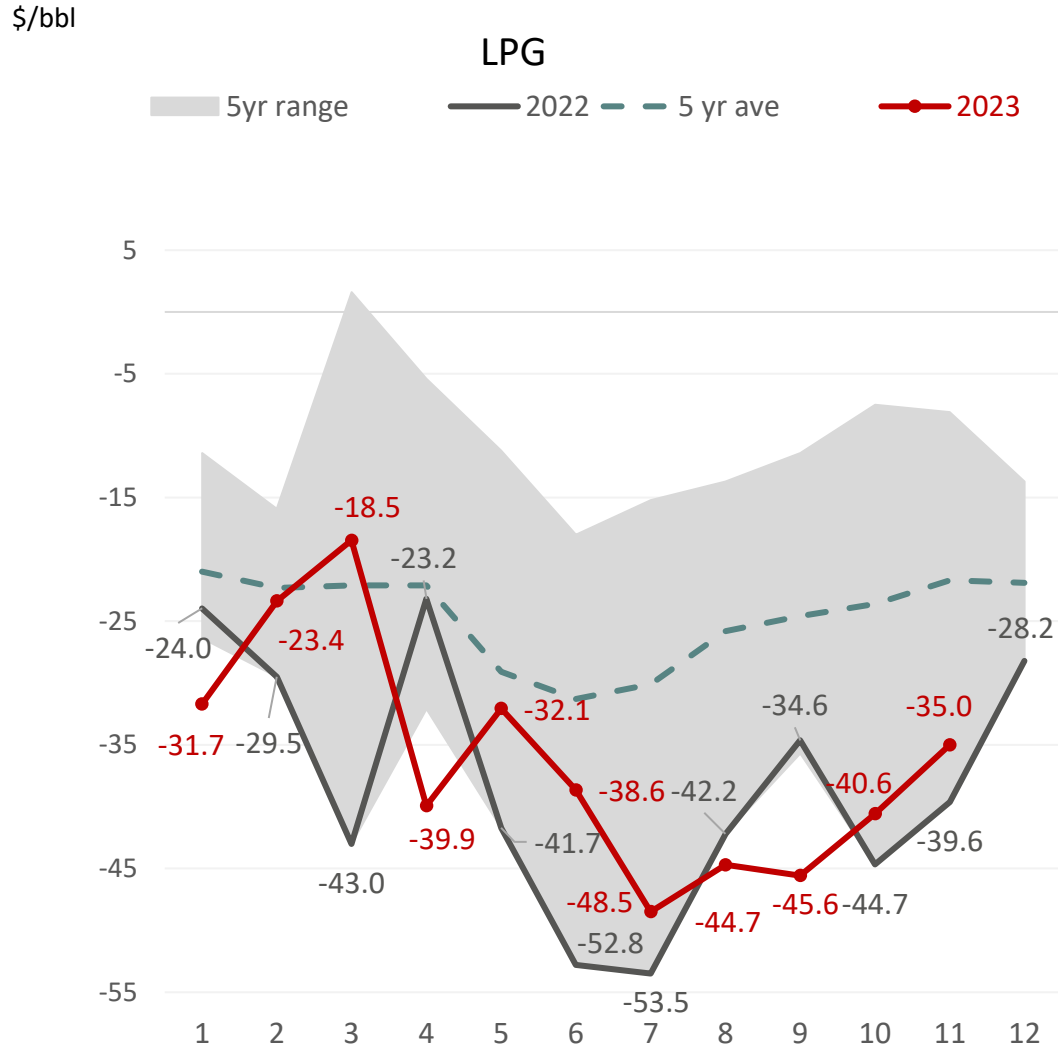


RUP Feedstock and Production

- Residuum Upgrade Plant (RUP) was completed in 2015 and it is the main conversion unit of Tüpraş.
- First periodic maintenance was completed in Q2 2019.



LPG and Naphta Cracks



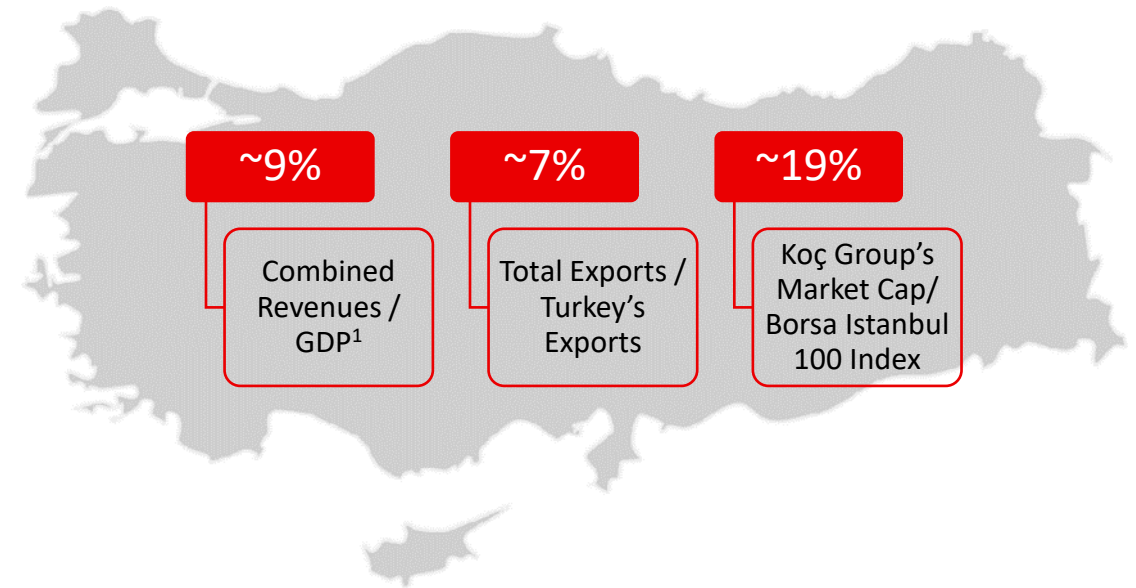
data as 30 November, 5 year range shows 2018-2022

Turkey's Leading Investment Holding Company

- Koç Holding is Turkey's largest industrial and services group
- The only Turkish company in Fortune Global 500².

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



Sustainability
Report



Strategic
Transition Plan



tuprasir@tupras.com.tr
