

# Uluslararası Enerji Fiyatları

Bariř Sanlı

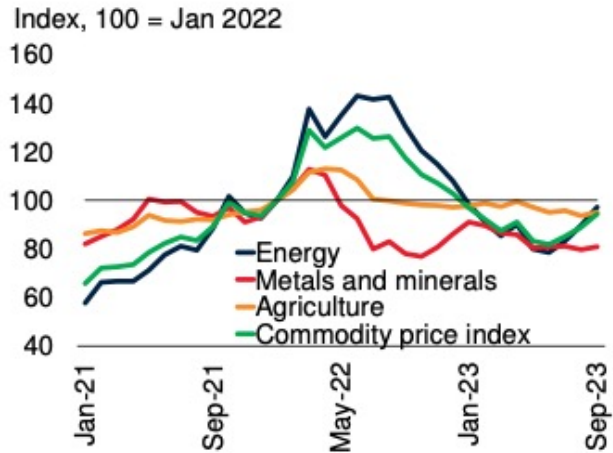
20 Kasım 2023

# uyarı

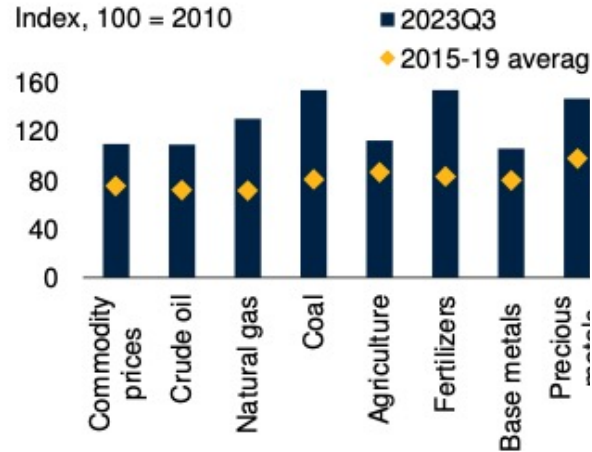
Bu sunumdaki bilgiler, **sunum tarihindeki kişisel görüşlerdir**. Geçmiş veya şimdiki herhangi bir bağlantıya atfedilemez. Bu bir yatırım haber bülteni/sunumu değildir ve burada açıkça veya zımnen hiçbir finansal/kurumsal tavsiye verilmemektedir. Güncellenmiş analizler ve gelişmelerin garanti ettiği gibi, görüşlerim gelecekte değişebilir ve değişecektir. Yanlışlar, yanlış anlatımlar olabilir. Bu sunumda hiçbir siyasi fikir/görüş yansıtılmayıp, eğitim amaçlı olarak tarihi olaylar yansıtılmaktadır. Bazı yorumlar eğlence amaçlı olup gerçekliği aranmamalıdır. Bu sunumdaki görüşler ve tarihi belgeler vaka çalışması olması içindir. **Türkiye için analiz/öneriler verilmemektedir.**

# Dünya Bankası – Emtia 2023 Ekim

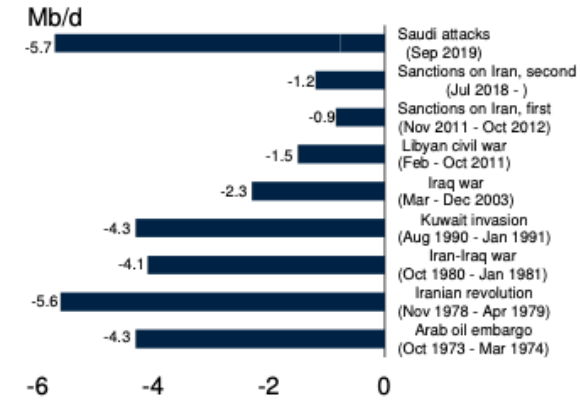
## A. Commodity prices



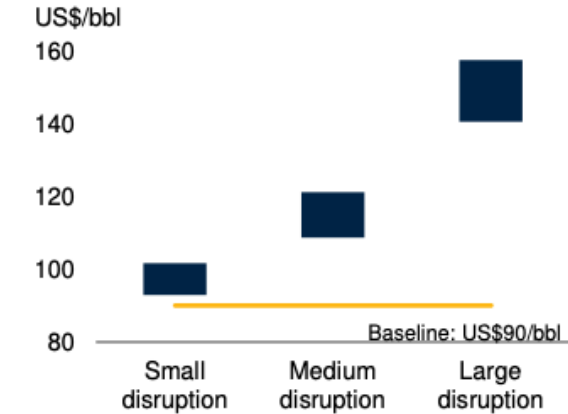
## B. Commodity price levels



## E. Conflict-driven oil supply disruptions



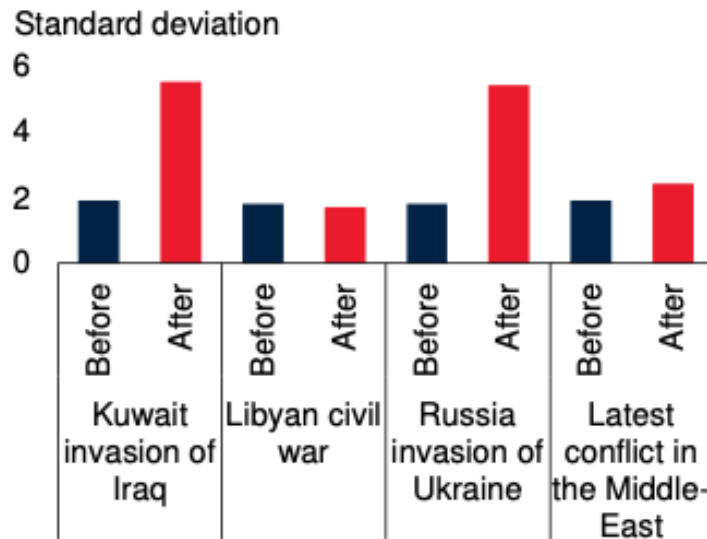
## F. Initial changes in oil prices under different scenarios



<https://www.worldbank.org/en/research/commodity-markets>

# Fiyat Hareketleri

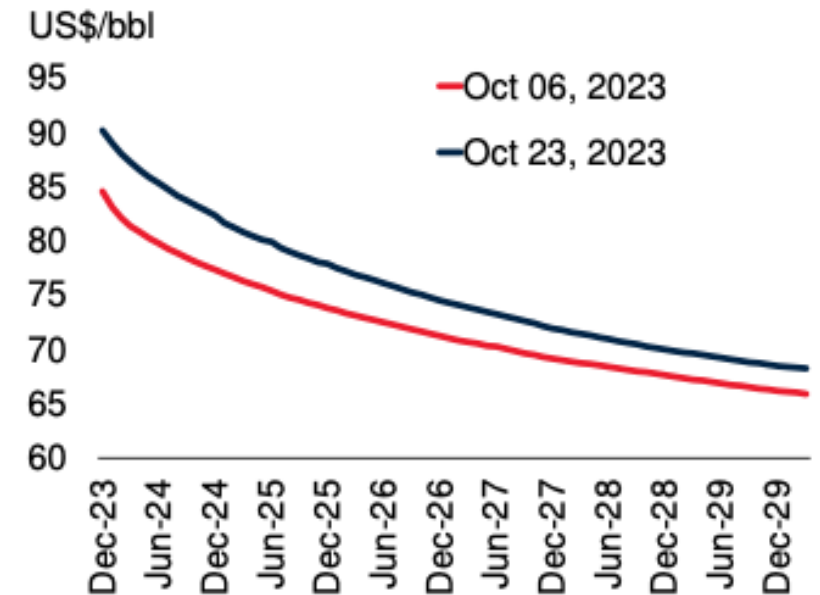
**E. Oil price volatility before and after conflicts**



**F. Real oil prices**



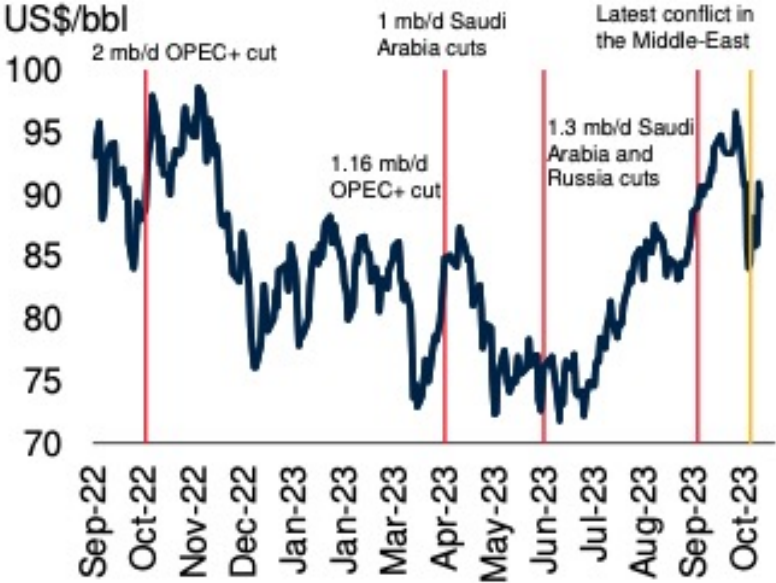
**B. Brent future prices before and after the attacks on Israel**



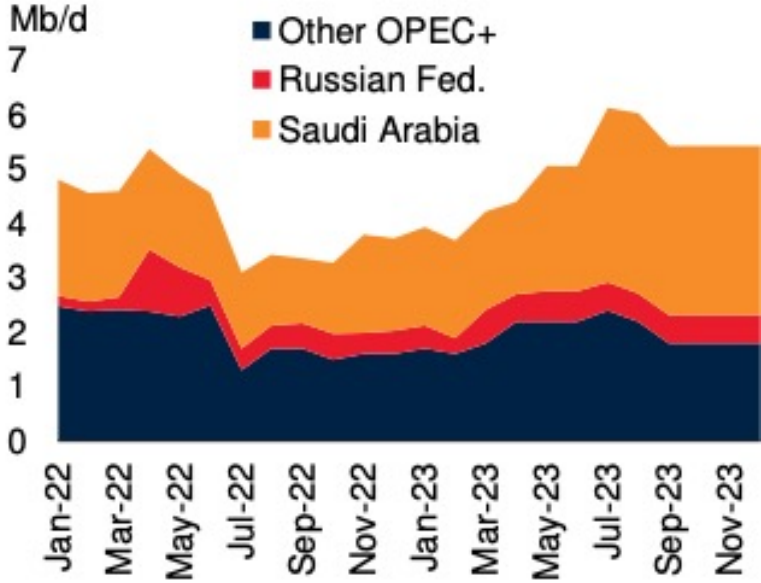
<https://www.worldbank.org/en/research/commodity-markets>

# Mevcut Durum

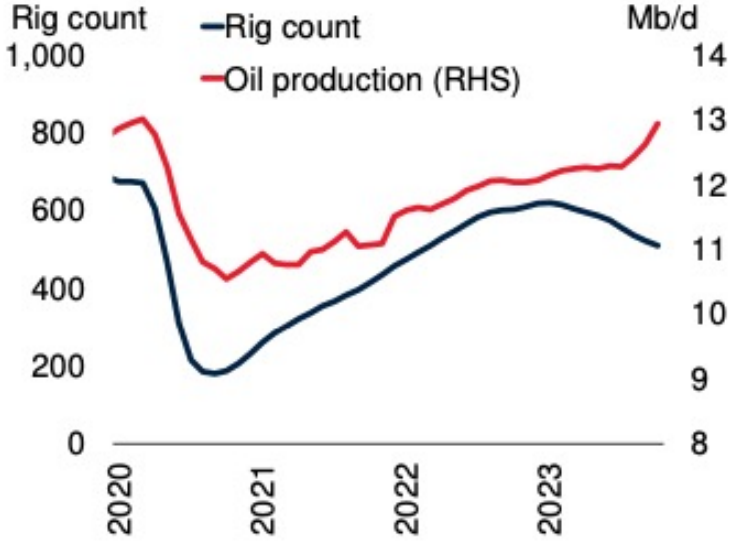
**A. Oil price and important events**



**B. OPEC+ spare capacity**



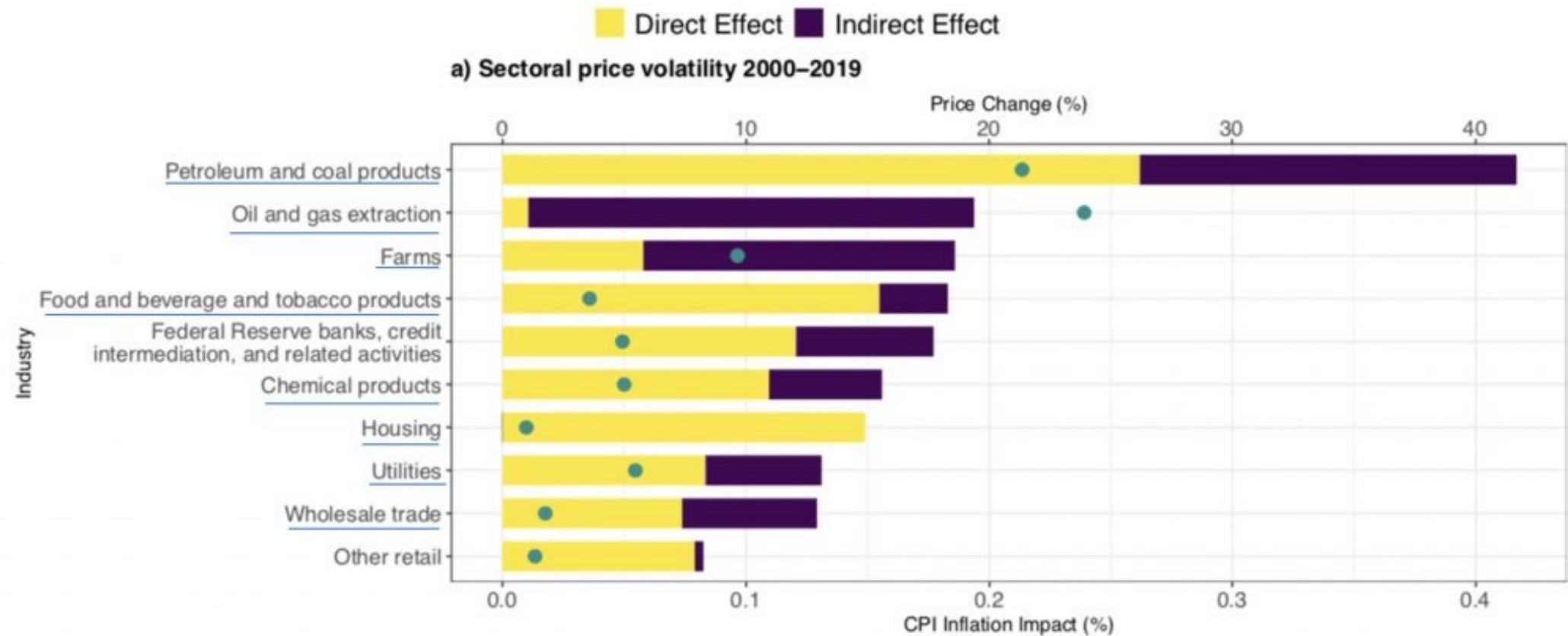
**D. U.S. rig count and oil production**



# Küresel Enerji Fiyatları

- Üst seviyede
  - Petrol (WTI, Brent), Kömür(API2), Doğalgaz(HH) ve LNG (JKM, Brent'in %x'i)
- Bir alt seviyede
  - ULSD, gasoil, gasoline
  - Petrokimya hammadde fiyatları
- Bir alt seviyede
  - DE BaseLoad, Peak Load, GÖP (elektrik fiyatları)
  - Petrokimya ürün fiyatları
- Hammaddeler, benchmarklar, ürünler, marjlar

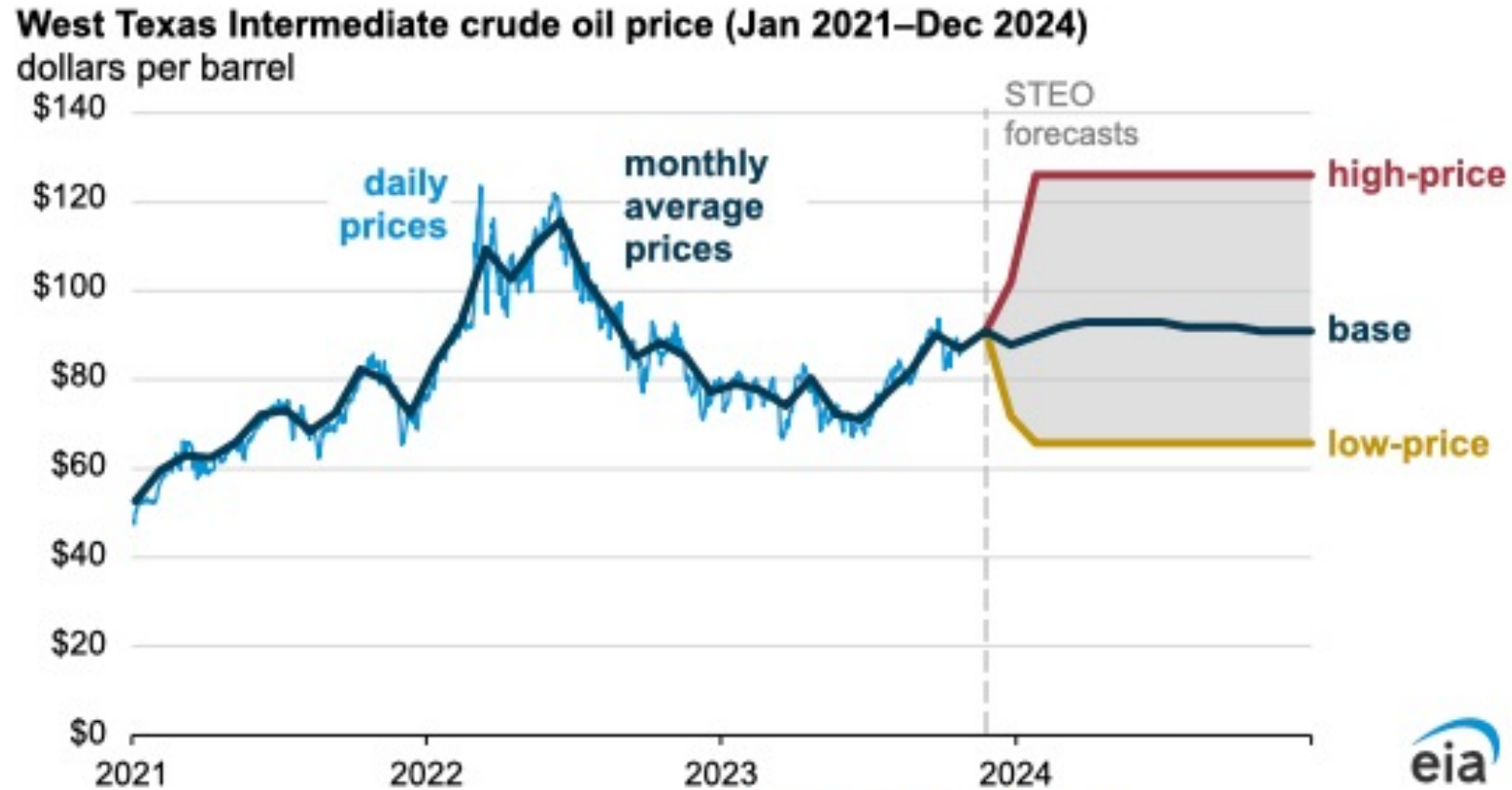
# Enerji Fiyatları Sandığımızdan Daha Önemli







# EIA – Fiyat Tahmini



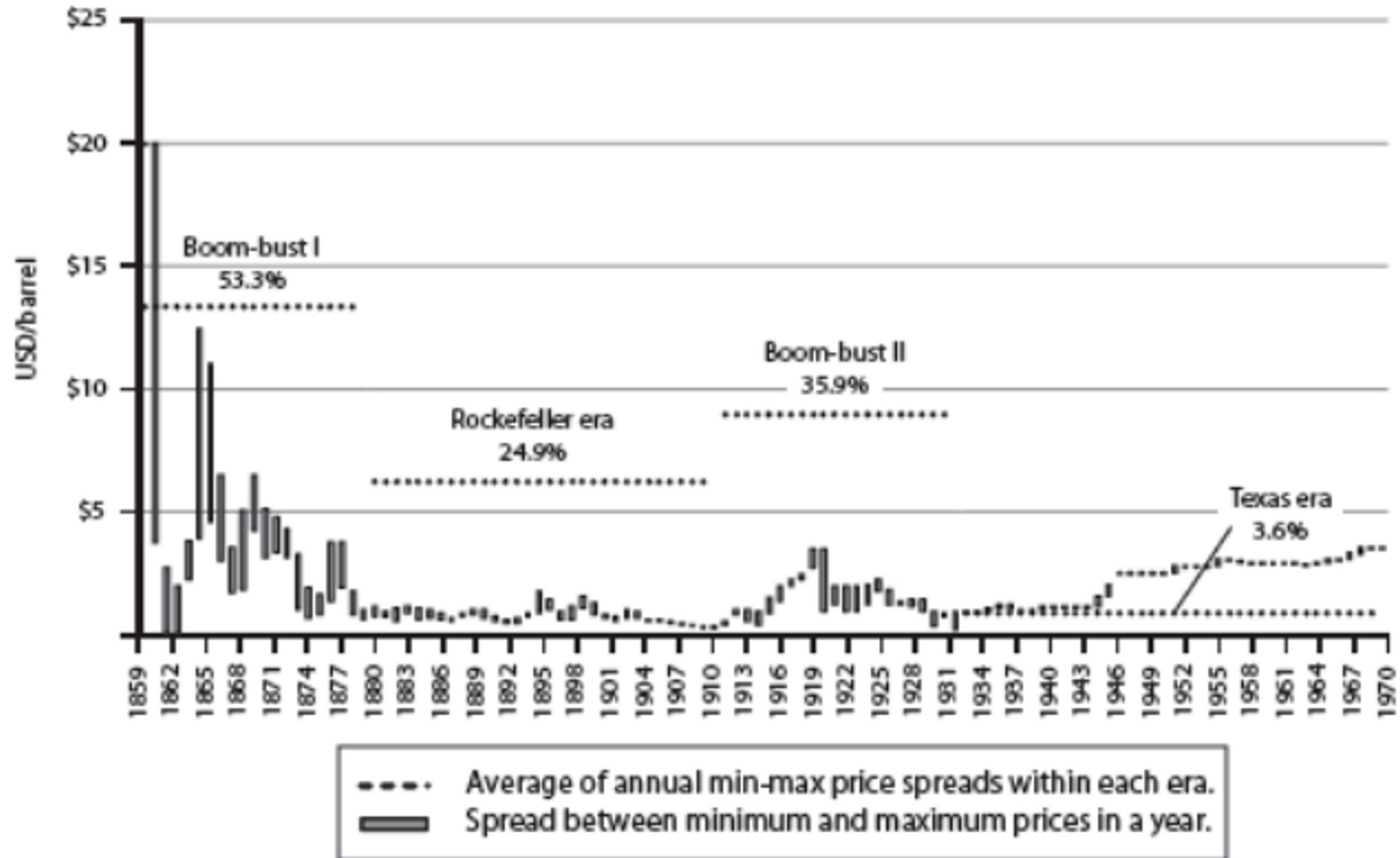
Data source: U.S. Energy Information Administration, *Short-Term Energy Outlook*, November 2023  
Data values: Energy Prices (monthly) and Cushing, OK WTI Spot Price FOB (daily) Production



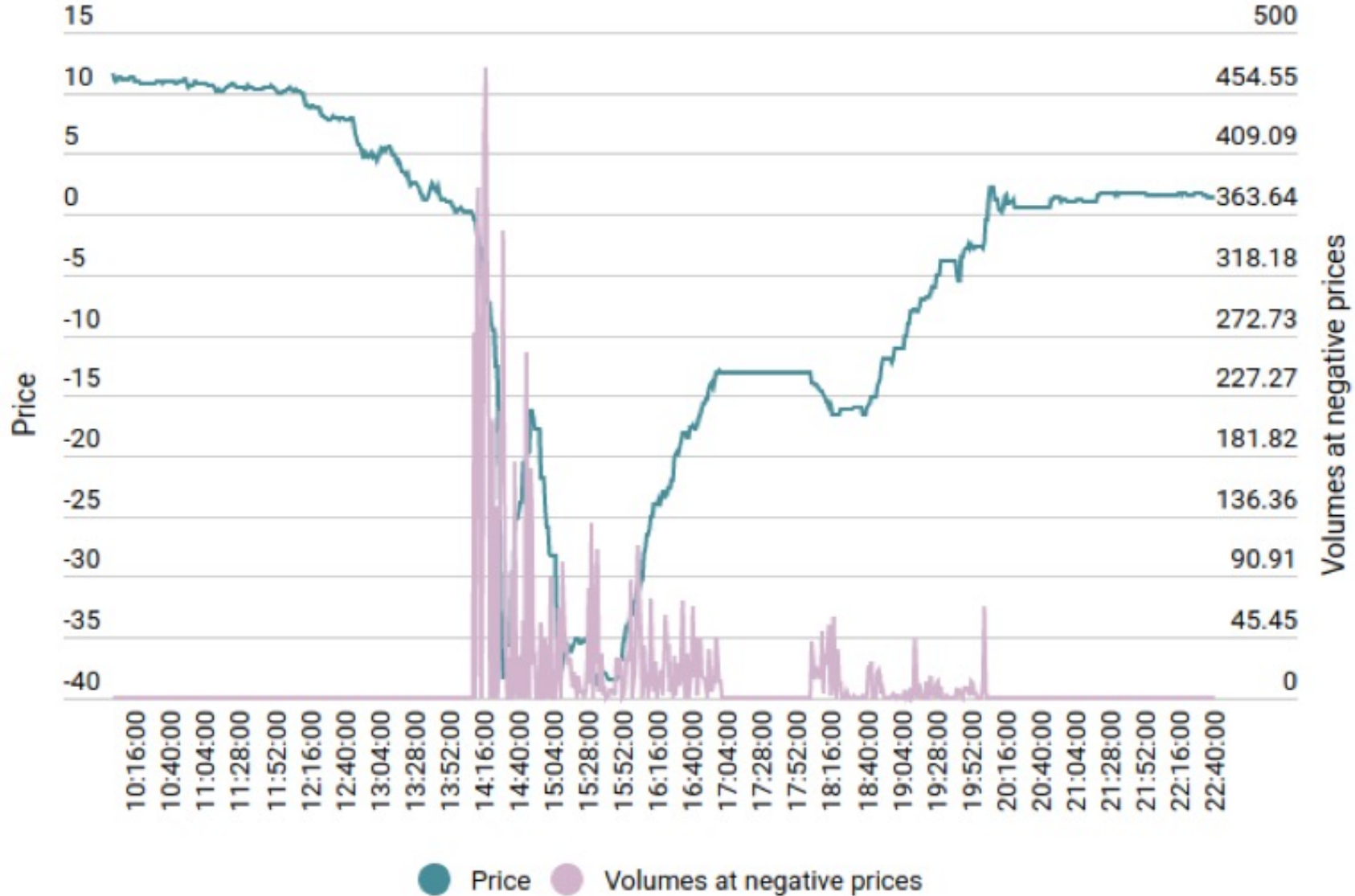
# Fiyat derken

- İşler karışık
  - Fiziksel fiyatı, gelecek belirliyor (Petrol?)
  - Fiziksel fiyatlar ileri bakmıyor (Metal?)
  - Fiyatları kağıt piyasa belirliyor (Petrol?)
  - Kısa pozisyonların etkisi (Suudi-OPEC)
  - Piyasa yapısı etkisi (Trade at Settlement) (Negatif Petrol fiyatlar)
  - Opsiyonlar (Giderek artıyor)

# Petrolün Düzeni



# Petroldeki piyasa yapısının sonuçları



<http://barissanli.com/calismalar/2020/20200510-negatifpetrolfiyati.pdf>

Sources: CME, Bloomberg data

# Negatif Petrol Fiyatı – Yapısını Bilmediğin Piyasa!

## US oil trades in negative territory for the first time

West Texas Intermediate

— \$ a barrel



Source: Refinitiv

© FT

[Court documents](#) released on Tuesday and first reported by Bloomberg show how the group — [dubbed the Essex Boys](#) — discussed trading strategies that day [over WhatsApp](#).

“I’m doing a fortune on TAS haha,” one of the traders is quoted as saying.

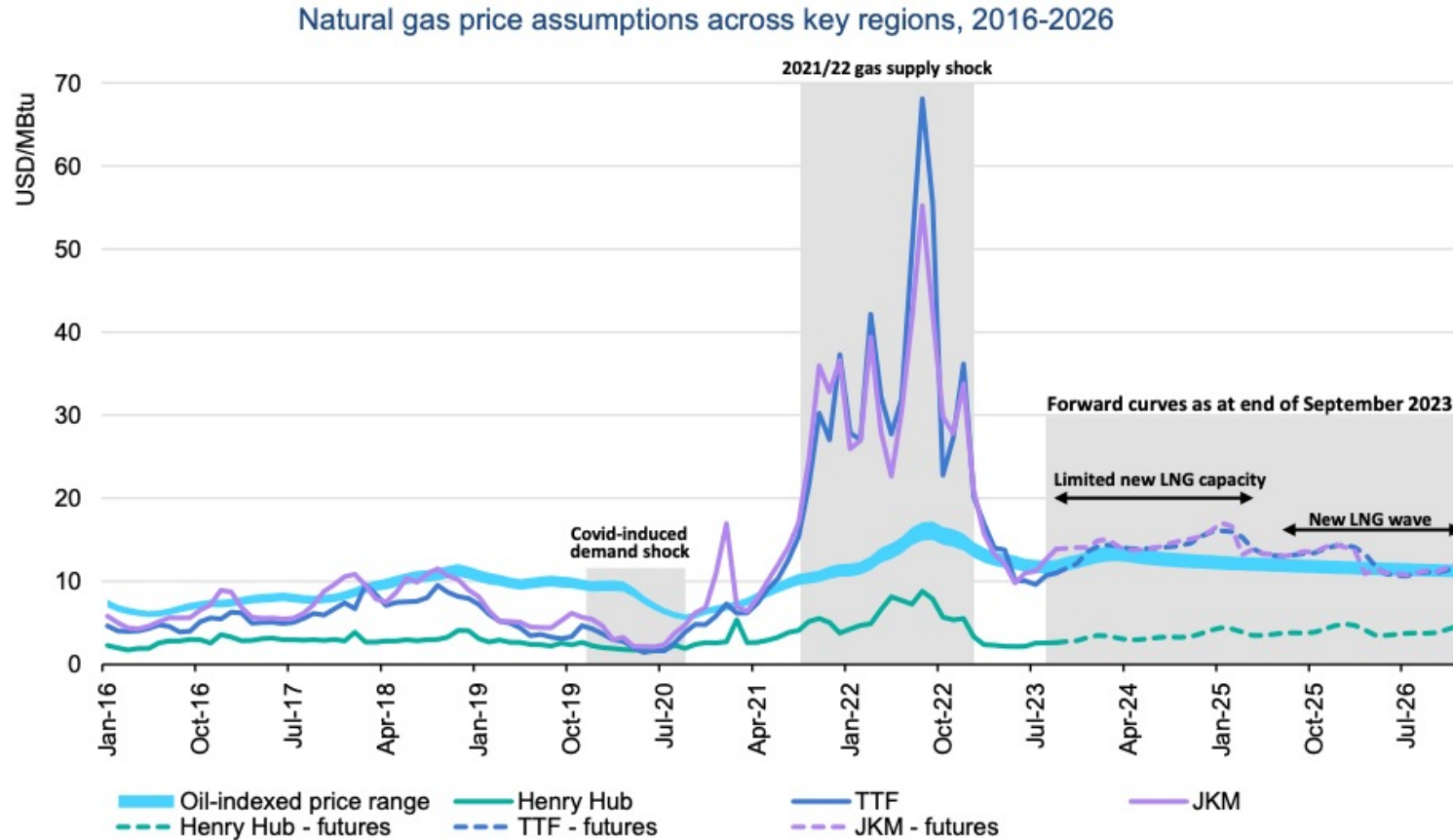
“We pushed each other so hard for years for this one moment . . . And we f\*\*\*\*\* blitzed it boys,” said another. A third added: “Please don’t tell anyone what happened today lads.”

US District Judge Gary Feinerman of Chicago gave the go-ahead for the case to progress, ruling that the allegations against eight of the 12 traders accused were plausible based on the communications, as well as on a “high degree of correlative trading”.

The defendants, whose identities are protected by court order, deny the allegations and contend they are independent traders who were following market signals during a period of turmoil. Vega Capital could not be reached for comment.

WTI futures on CME Group’s New York Mercantile Exchange had crashed by \$56 a barrel to close at negative \$37.63 as a shortage of physical storage space led investors to dump futures contracts rather than take delivery. The price recovered to around \$10 the next day, allegedly giving the group its windfall.

# Gaz Fiyatları

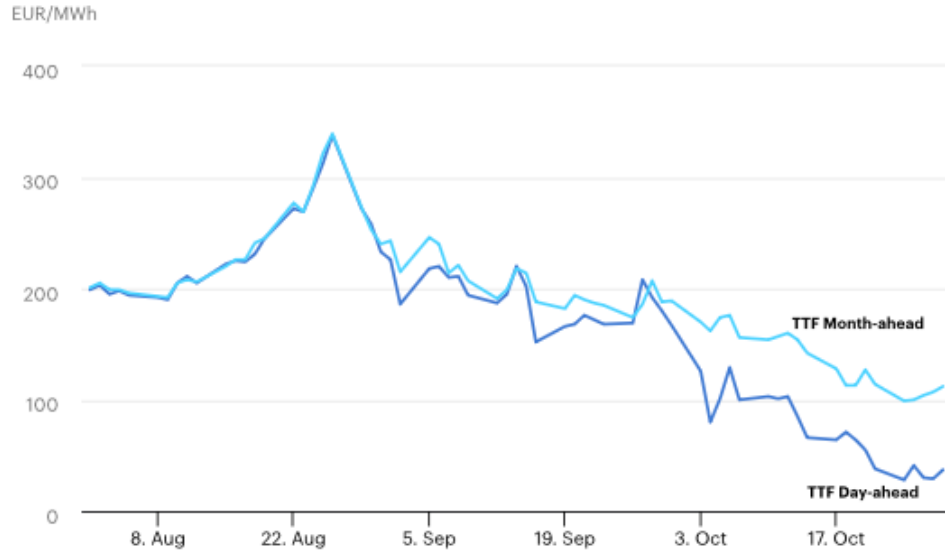


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# Gaz Güvenliği - Maliyeti

Day-ahead and month-ahead TTF prices in European Union, August-October 2022

Open ↗

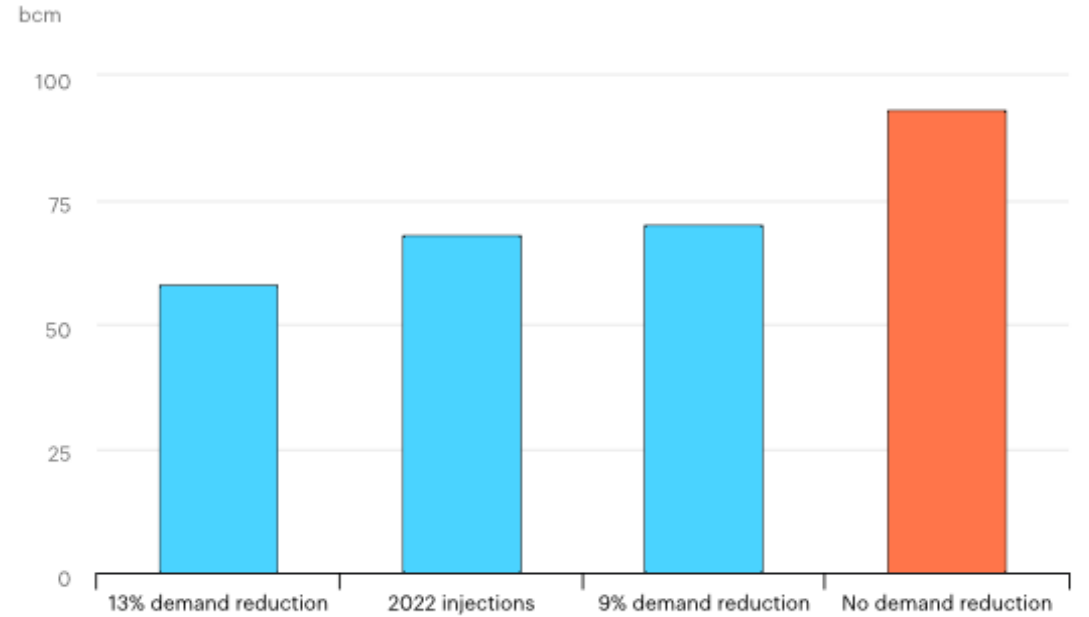


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● TTF Month-ahead ● TTF Day-ahead

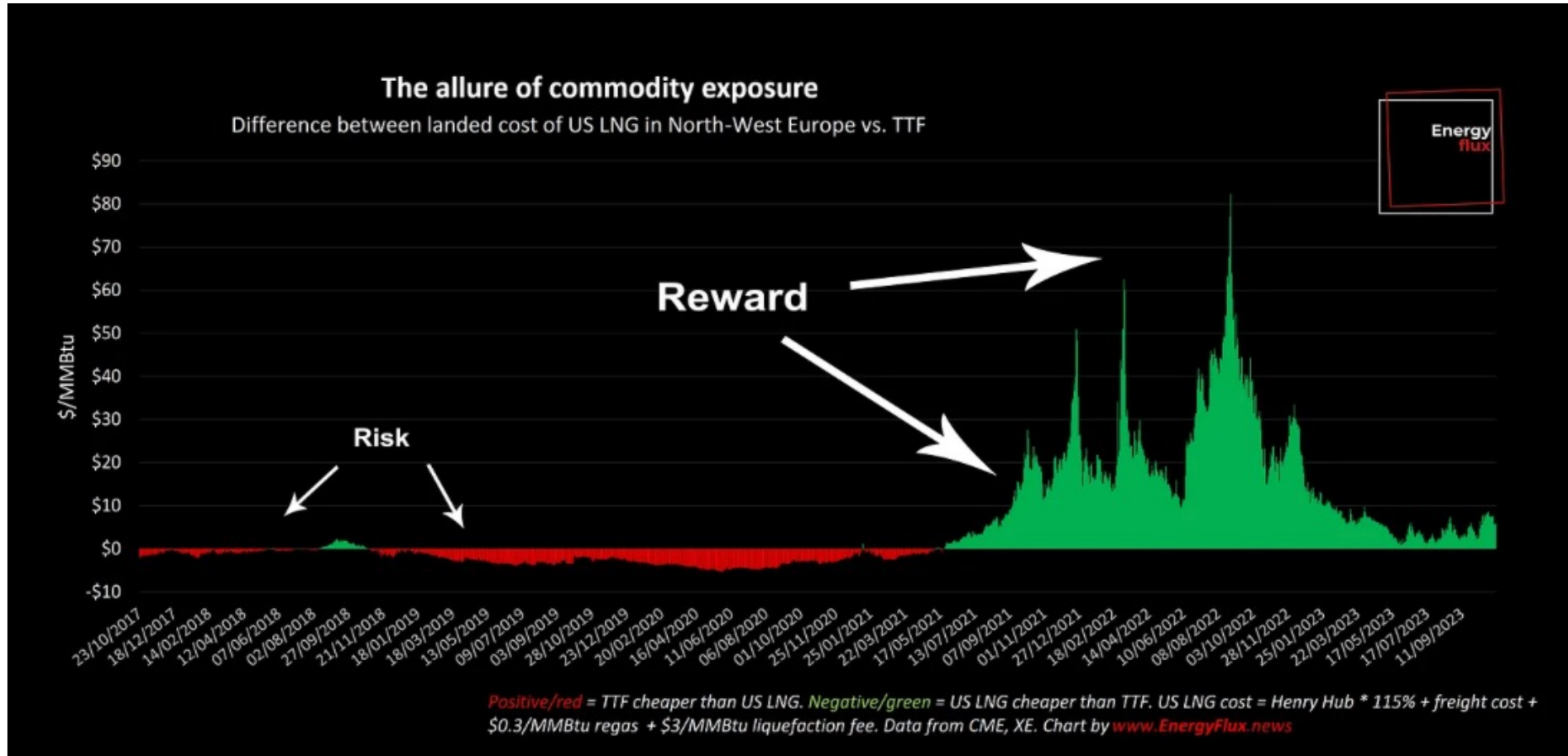
Gas injection needs in summer 2023 to reach 95% fill level

Open ↗



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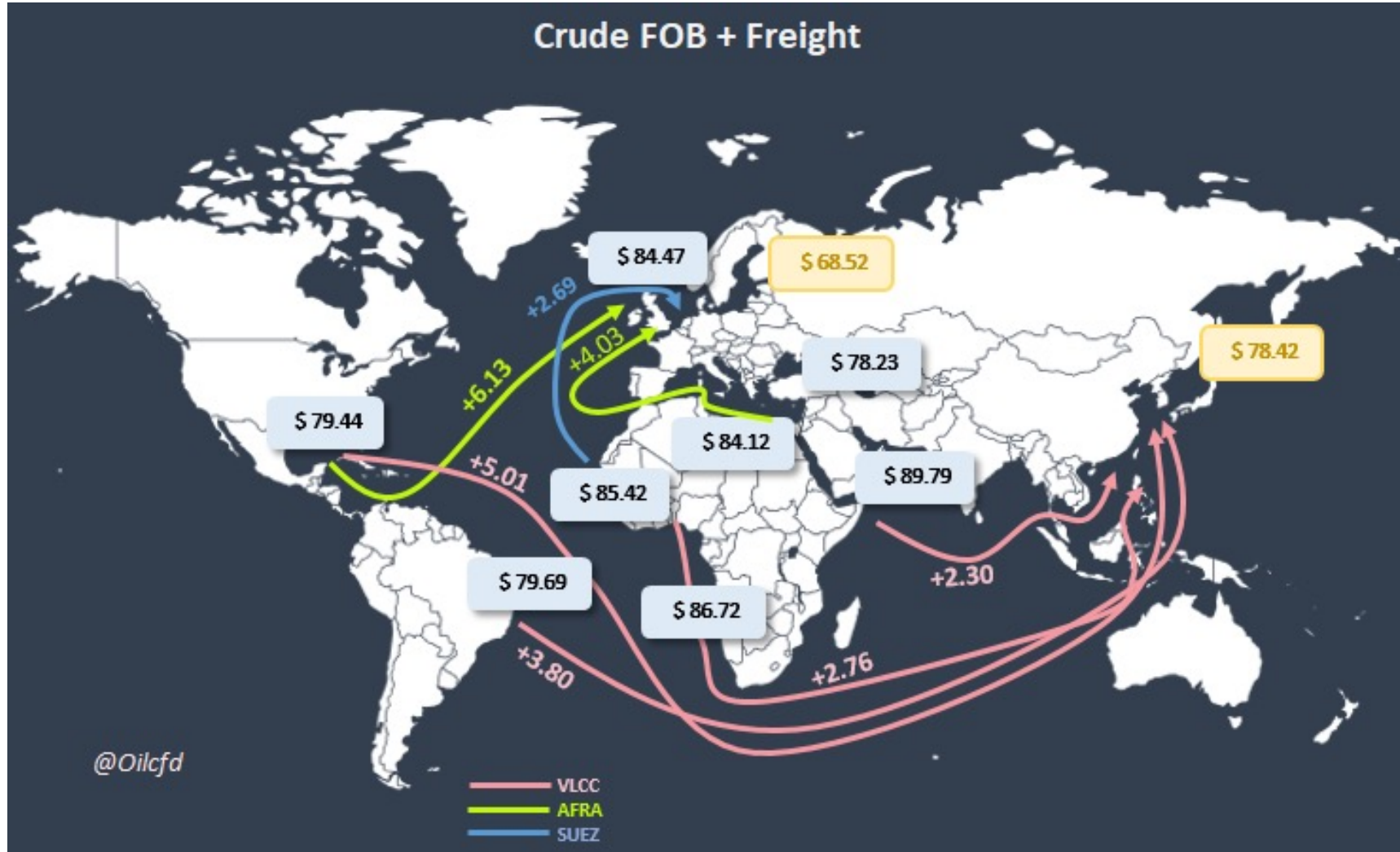
# Avrupa'nın gaz faturasası



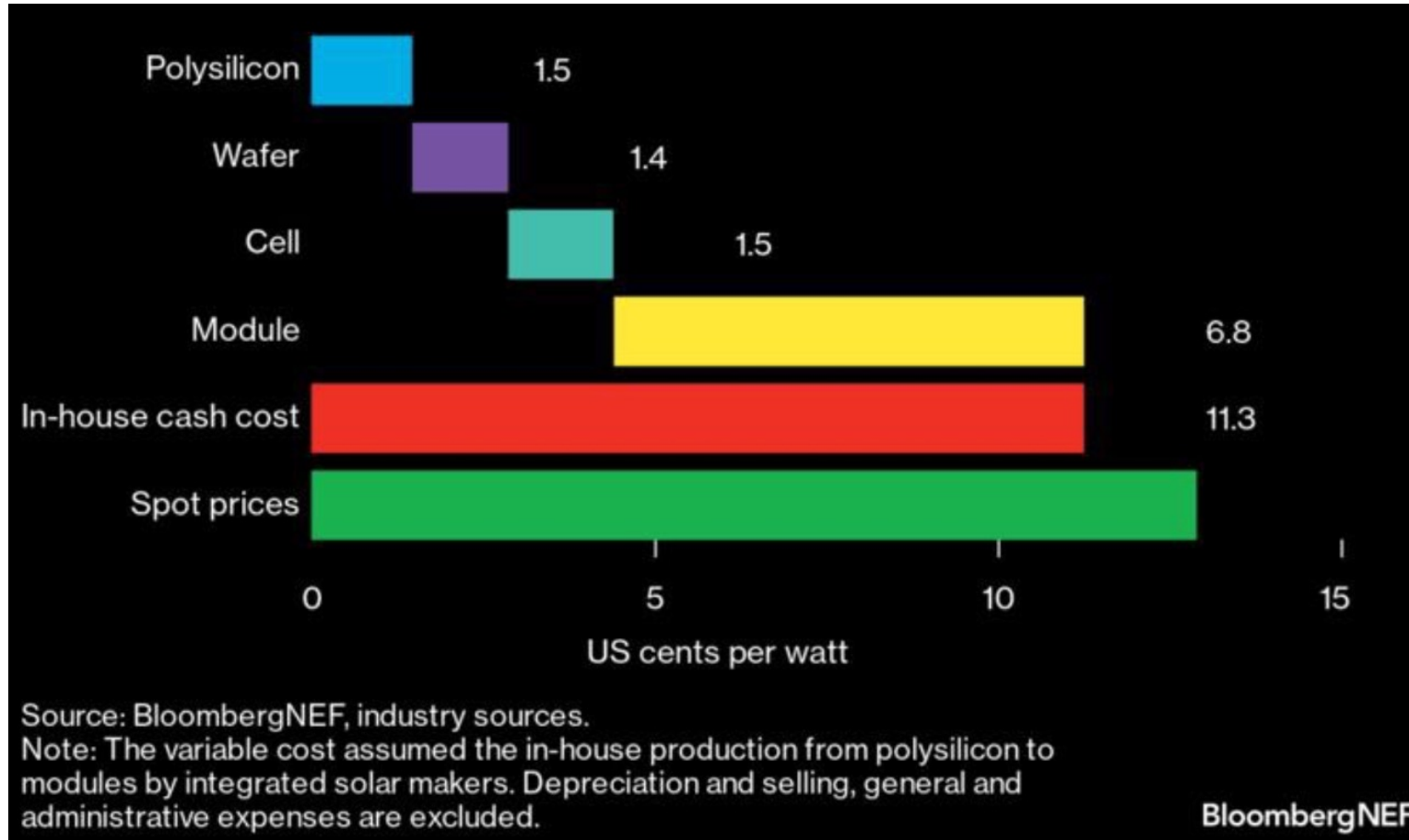
<https://www.energyflux.news/p/greed-is-killing-gas-demand-growth>



# Taşıma maliyetleri ile

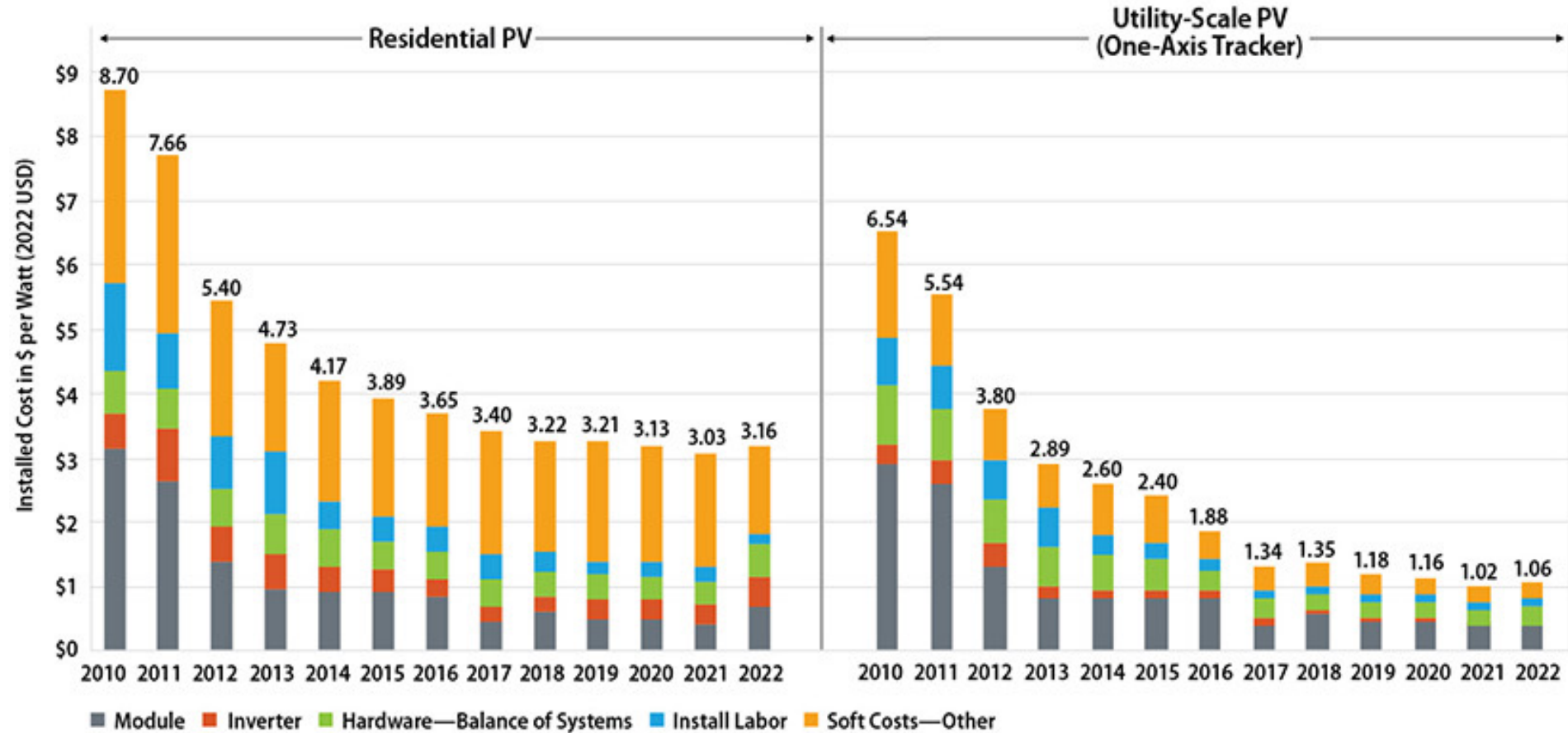


# Güneş paneli fiyatının bileşenleri



<https://twitter.com/gerardreid14/status/1726482530205897174/photo/1>

# Güneş – Tüm sistem maliyetleri

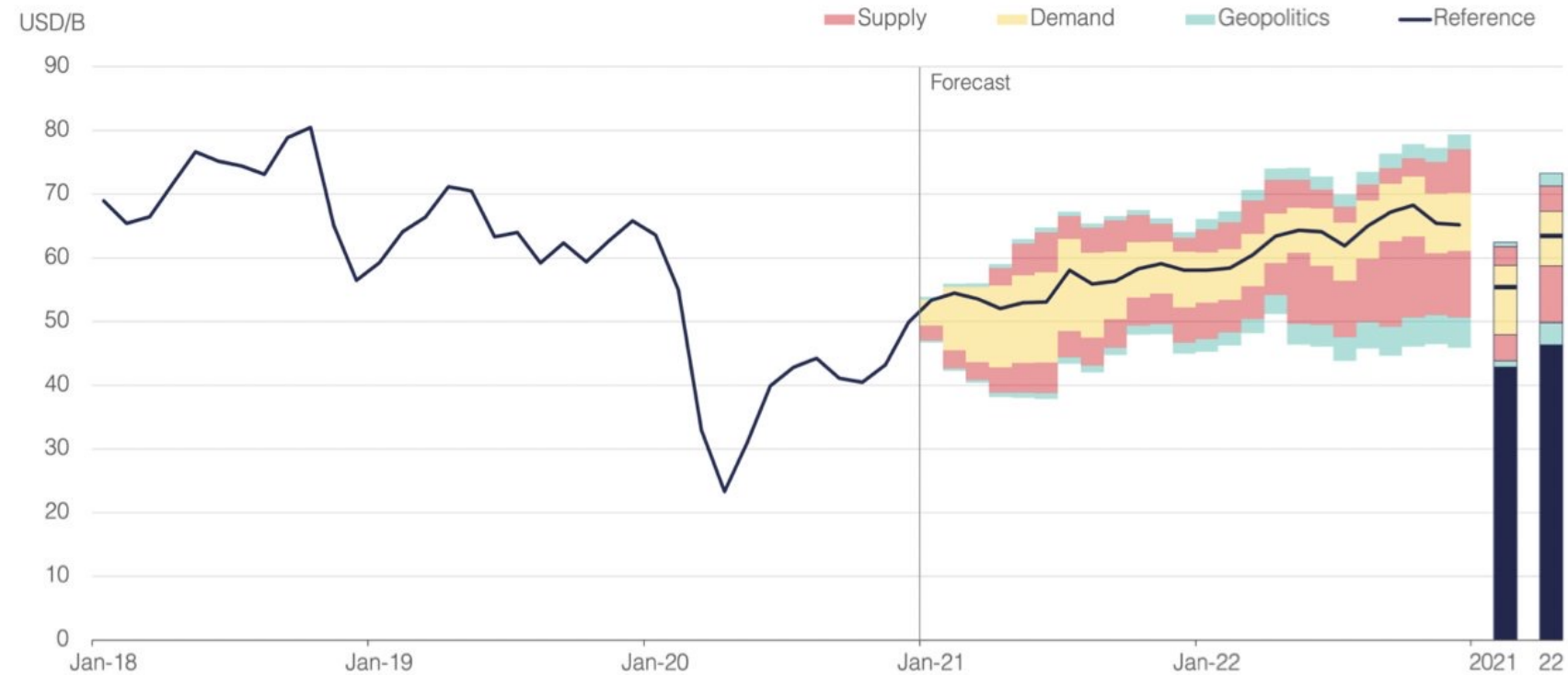


<https://www.nrel.gov/solar/market-research-analysis/solar-installed-system-cost.html>

# Çaresiz miyiz?

- Fan chart - Olasılıklar

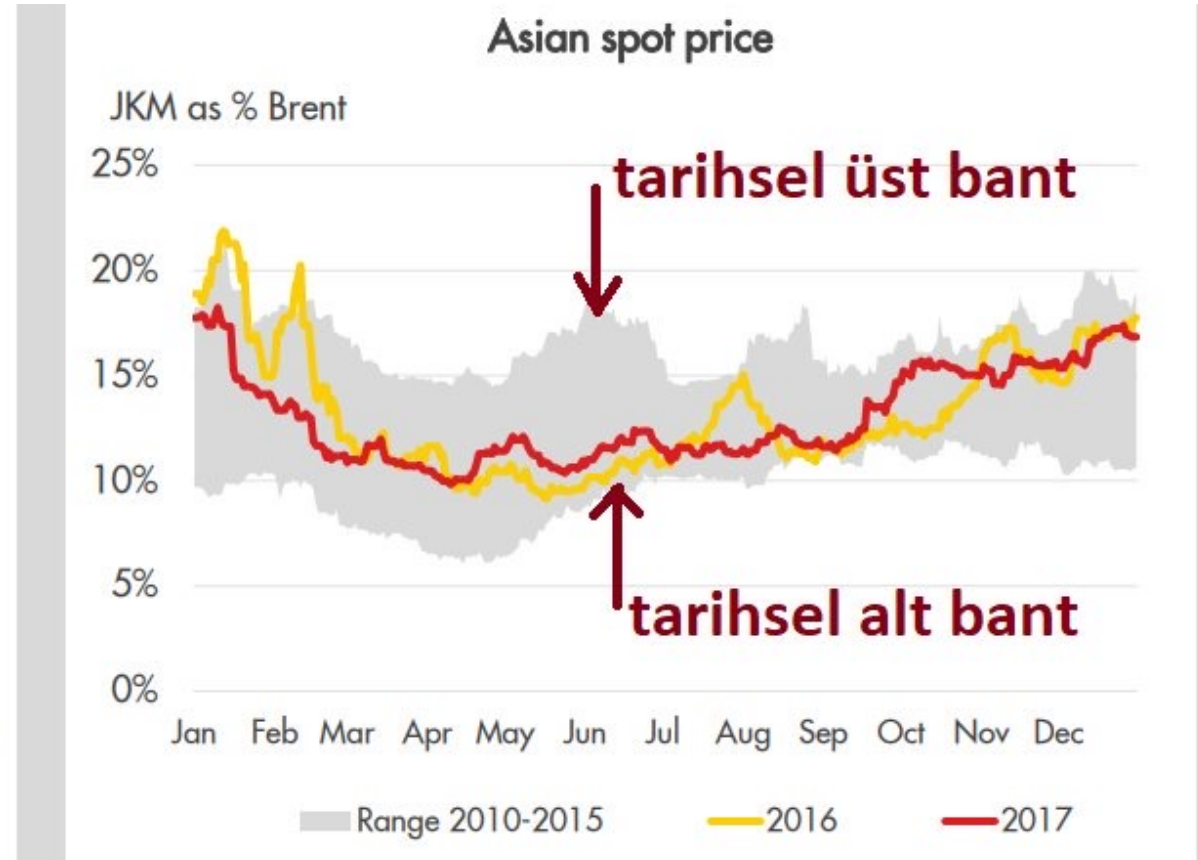
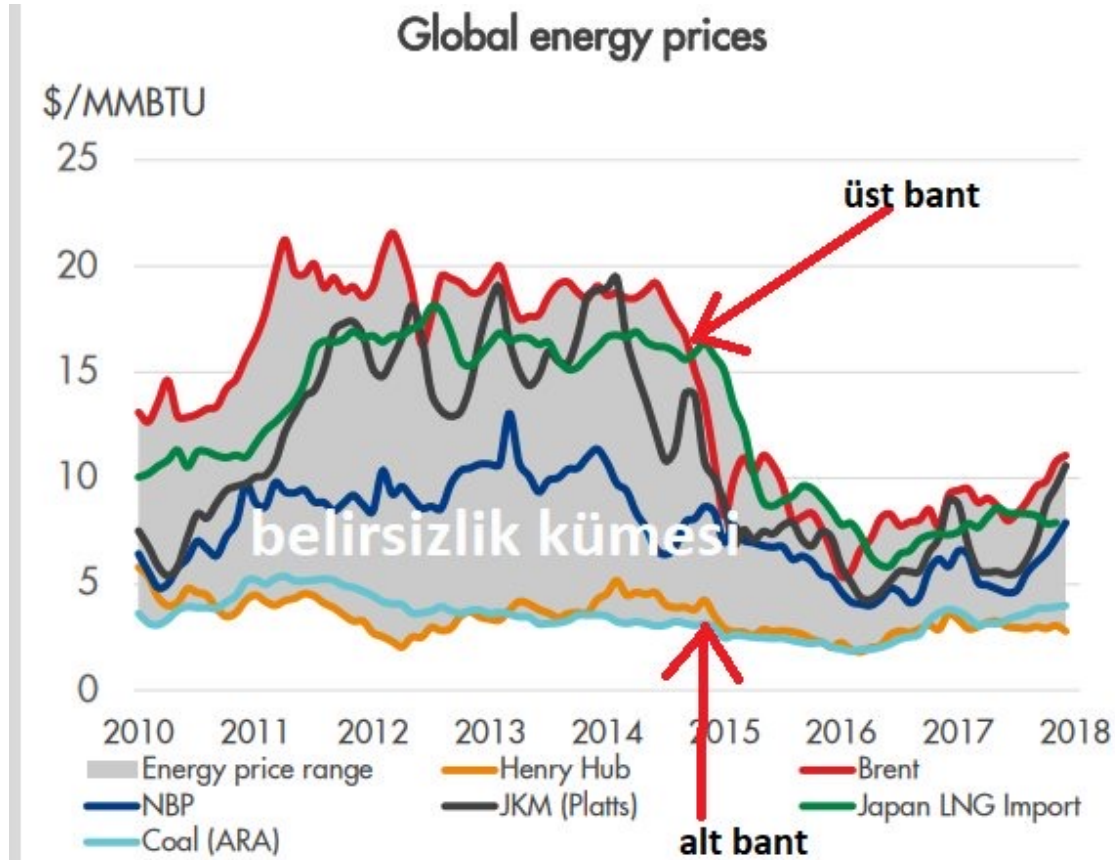
## Balance of risks



Notes: Brent price. Source: OIES

# Çaresiz miyiz?

- Alt band – üst band



Source: Japanese customs data (Japan LNG import), S&P Global Platts (JKM), ICE (NBP, Brent, ARA coal), NYMEX (Henry Hub)

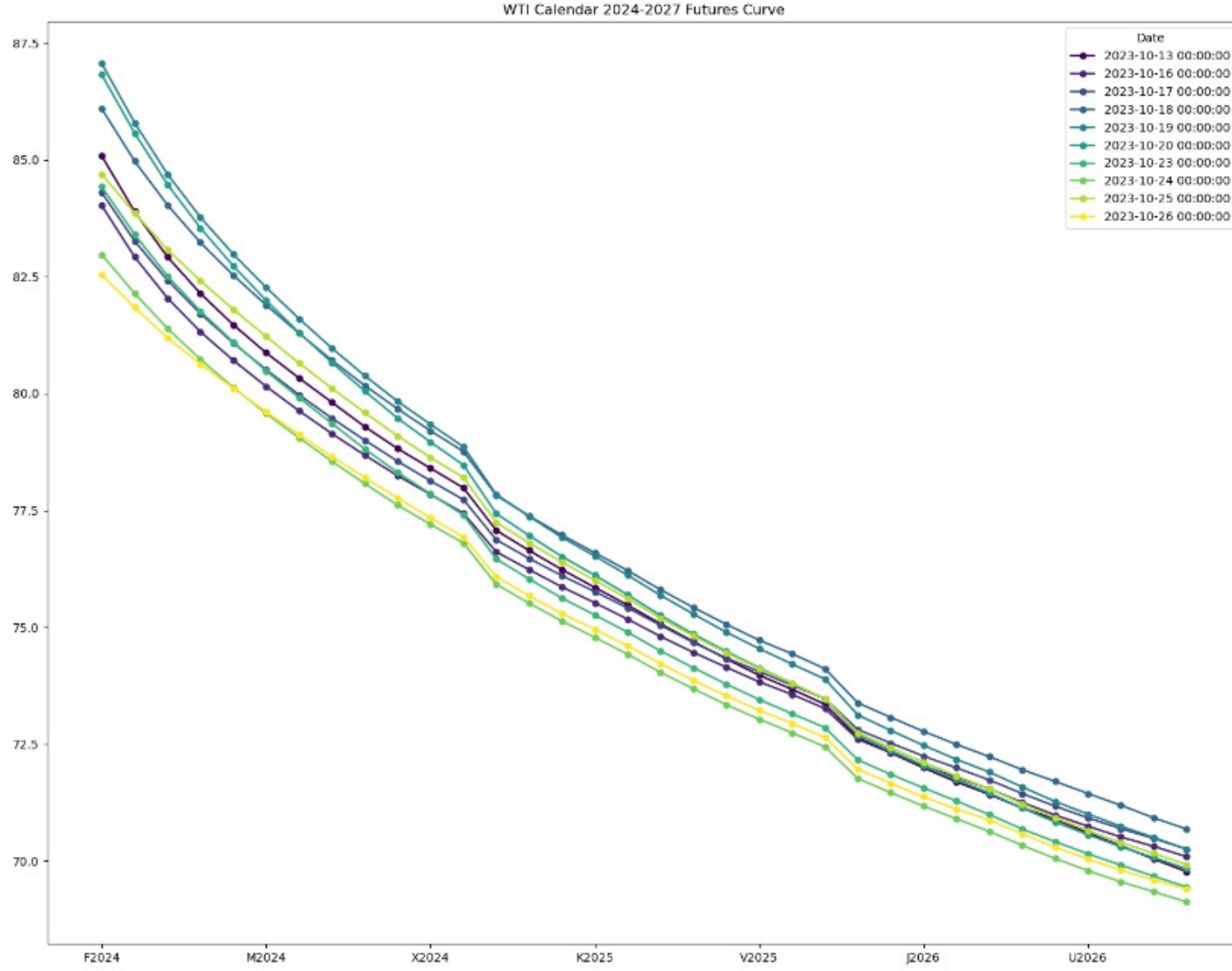
# Finansal Araçlar

- Opsiyon Kontratları
  - Call – fiyat tavanı
  - Put – fiyat tabanı
- Gelecek Fiyatları

WTI 31-Oct-2023 preliminary											
	Volume		Open Interest		Change		FUTURES			PRICE	
	Call	Put	Call	Put	Call	Put	Volume	Open Int.	Change	SETTLE	Change
<b>TOTAL</b>	<b>97 180</b>	<b>64 367</b>	<b>1 434 627</b>	<b>1 034 711</b>	<b>10 246</b>	<b>15 321</b>	<b>732 326</b>	<b>1 671 784</b>	<b>1 196</b>		
DEC23	59 871	43 791	637 783	474 175	-910	4 566	337 331	319 030	-5 313	81,02	-1,29
JAN24	14 637	5 795	152 003	118 638	3 223	1 428	133 780	211 044	1 316	80,50	-1,18
FEB24	4 253	6 411	75 508	55 879	1 618	4 964	60 048	111 504	5 920	79,96	-1,03
MAR24	10 238	3 159	133 742	93 527	3 151	630	43 777	112 916	4 908	79,42	-0,92
APR24	255	602	13 041	22 560	59	507	16 695	63 079	-2 273	78,93	-0,85
MAY24	140	124	18 599	9 352	39	77	10 914	50 065	822	78,47	-0,79

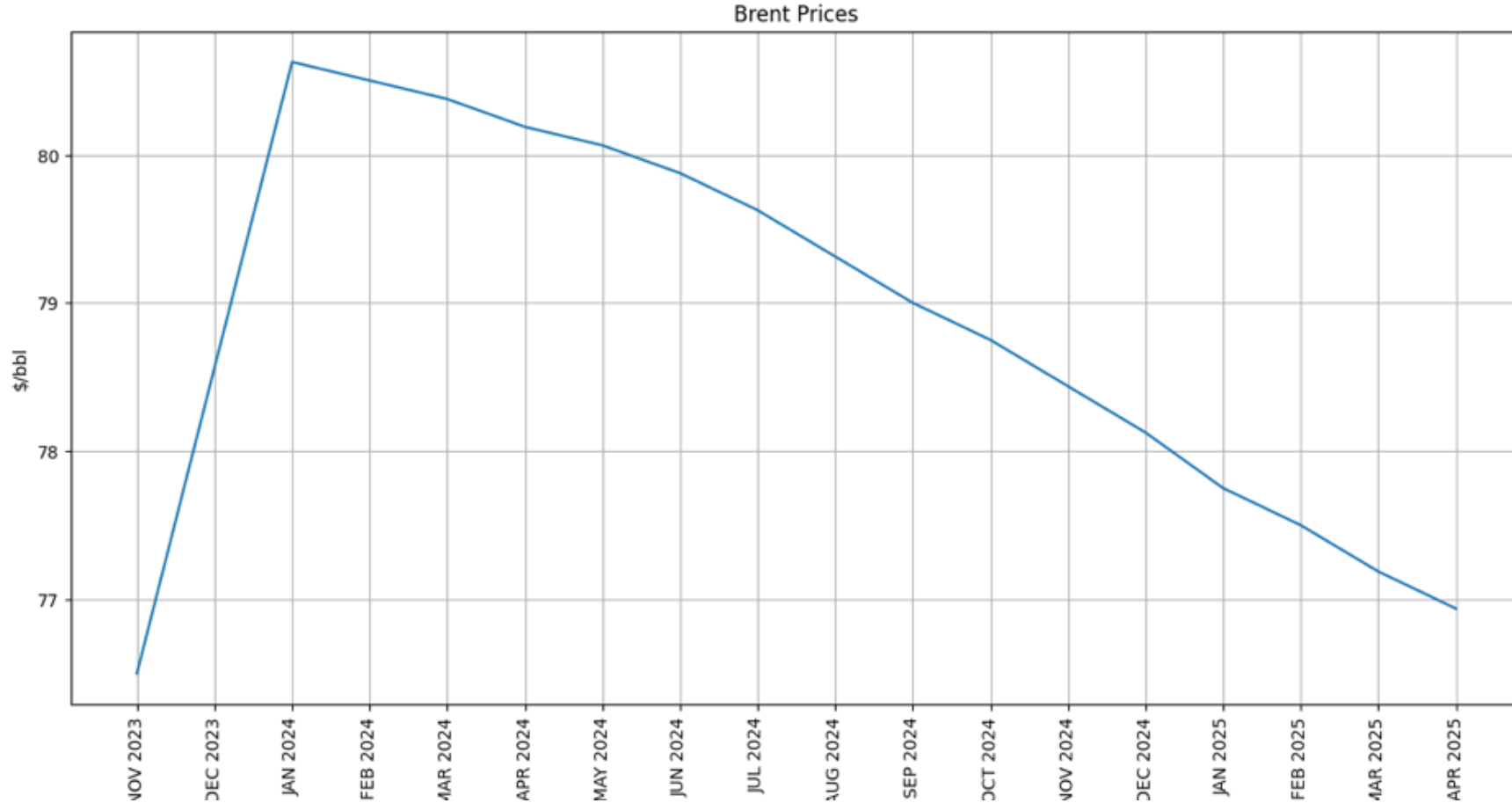
  

TOP VOLUME			TOP OPEN INTEREST			TOP CHANGES					
	Strike	Lots		Strike	Lots		Strike	Lots			
Call	DEC23	95	14 535	Call	DEC23	100	Call	DEC23	95	-5 296	
	DEC23	100	5 126		DEC23	115		34 952	DEC27	100	1 500
	DEC23	90	4 850		DEC23	114		32 551	DEC27	150	1 500
	DEC23	85	3 001		DEC23	110		30 622	JUN24	110	-1 239
	DEC23	88	2 961		DEC23	120		25 004	MAR24	130	1 205
Put	DEC23	70	7 164	Put	DEC23	60	Put	FEB24	66	2 059	
	DEC23	80	5 348		DEC23	70		32 858	FEB24	67	1 973
	DEC23	75	4 993		DEC23	65		26 717	DEC23	70	1 282
	FEB24	66	2 107		DEC23	75		23 928	DEC23	80	-1 088
	FEB24	67	2 014		DEC23	80		23 917	DEC24	77	1 000



# Gelecek Fiyatlarından

# Gelecek 18 ay petrol fiyatları

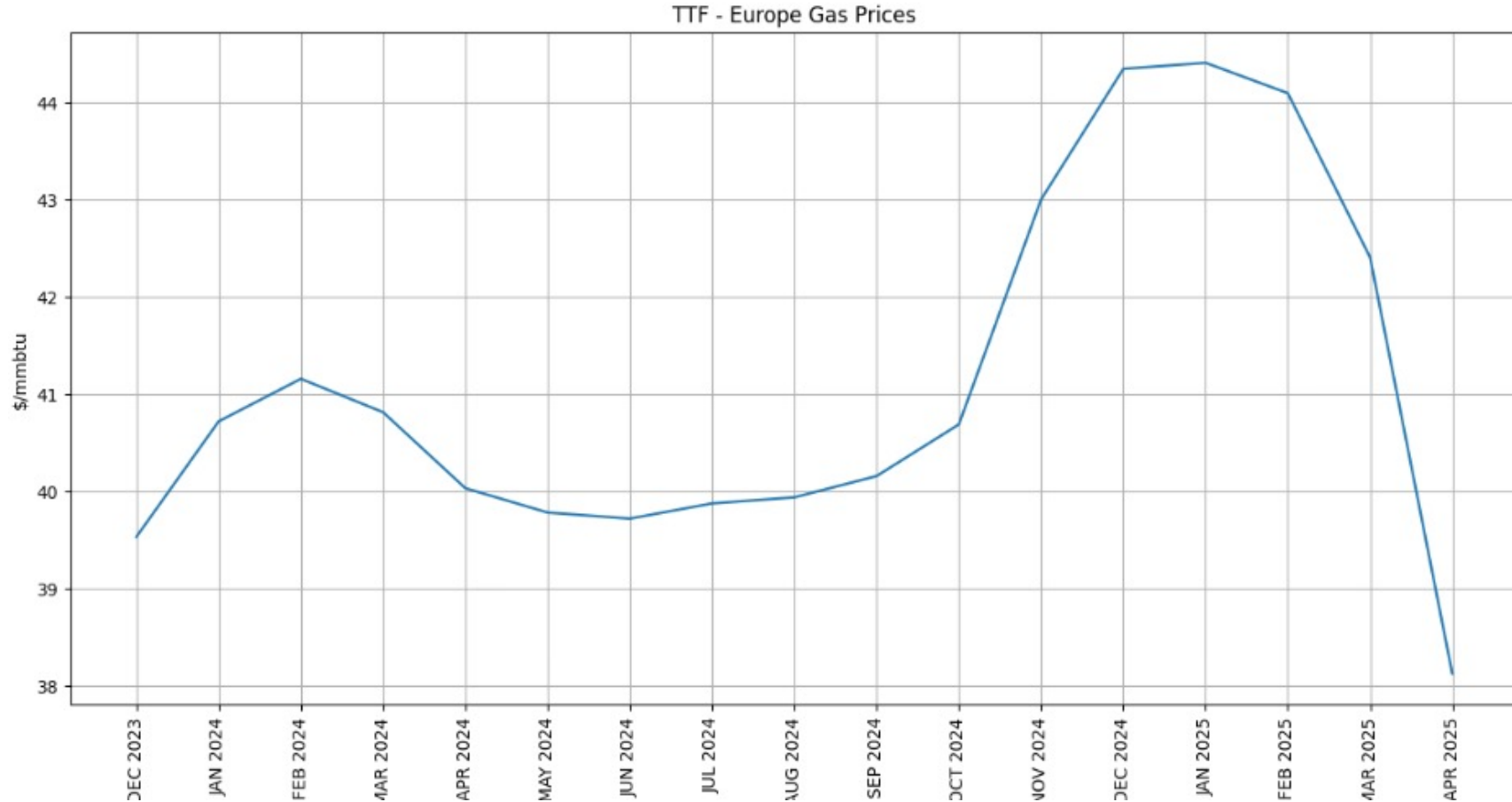


[http://barissanli.com/calismalar/2022/tr\\_18ayenerjifiyatlari-bsanli.ipynb](http://barissanli.com/calismalar/2022/tr_18ayenerjifiyatlari-bsanli.ipynb)

[http://barissanli.com/calismalar/2022/20220203-tr\\_18ayenerjifiyatlari-bsanli.pdf](http://barissanli.com/calismalar/2022/20220203-tr_18ayenerjifiyatlari-bsanli.pdf)



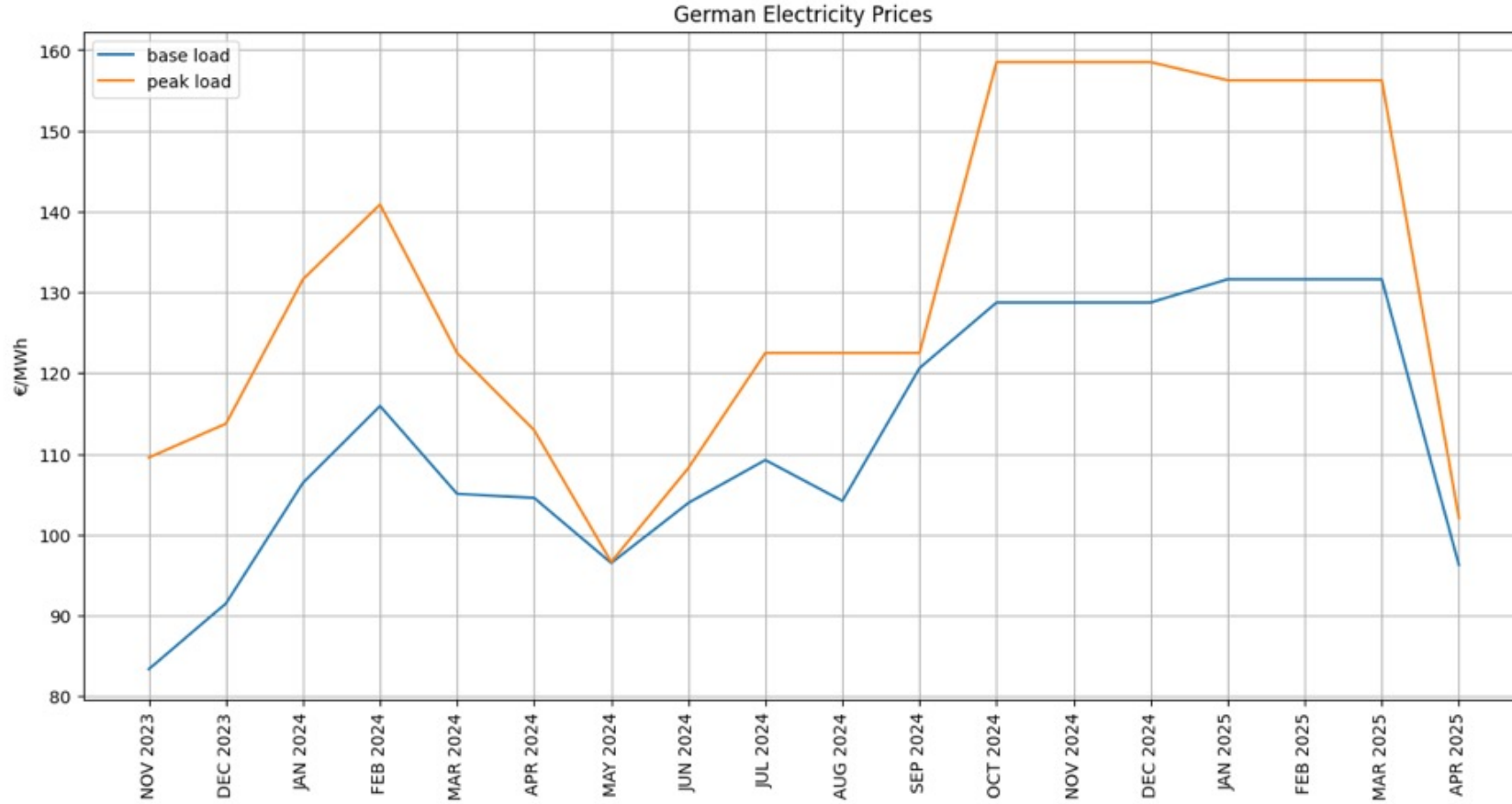
# Avrupa Gaz Fiyatları



[http://barissanli.com/calismalar/2022/tr\\_18ayenerjifiyatlari-bsanli.ipynb](http://barissanli.com/calismalar/2022/tr_18ayenerjifiyatlari-bsanli.ipynb)

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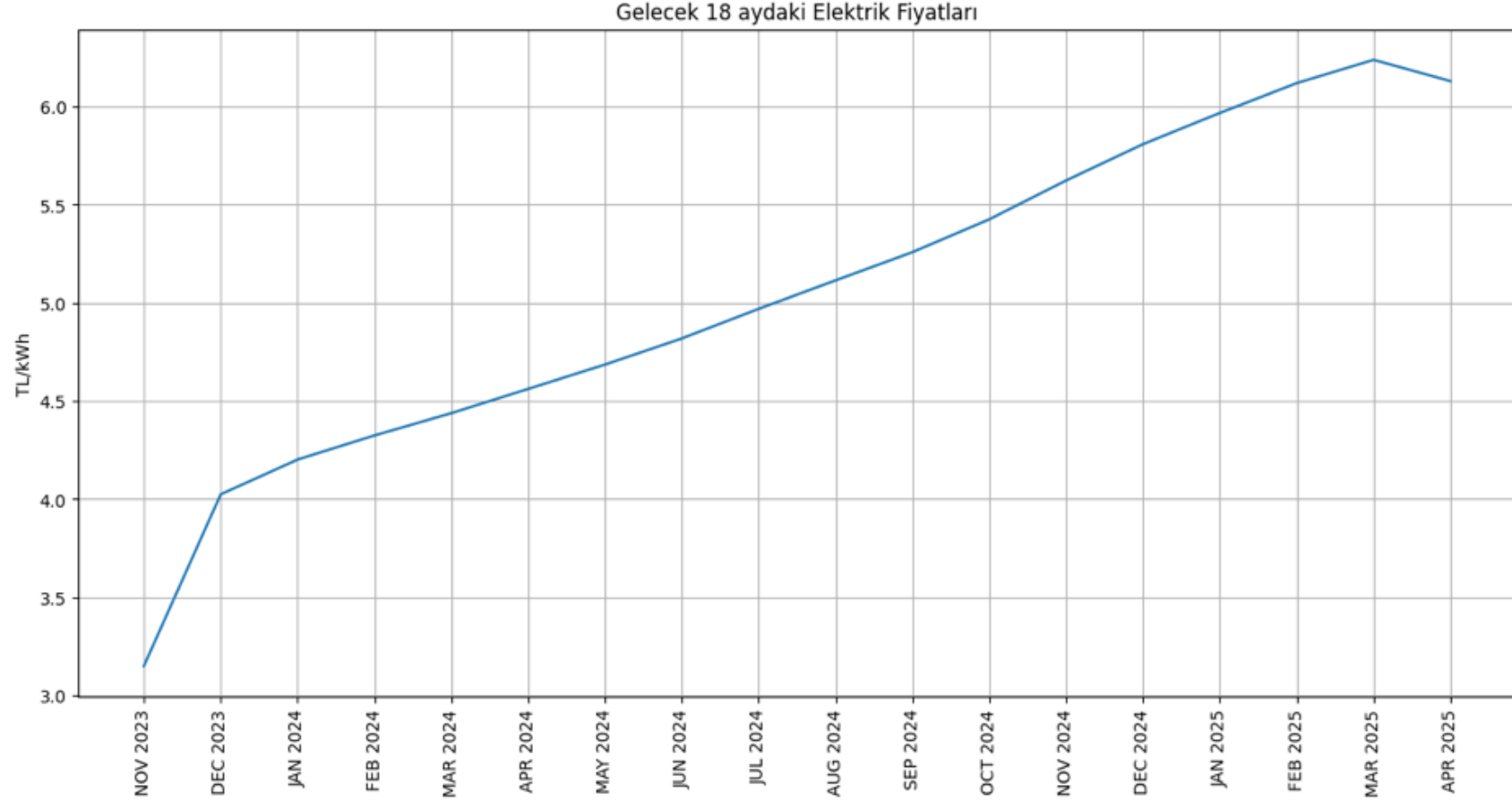
# Alman Elektrik Fiyatları



[http://barissanli.com/calismalar/2022/tr\\_18ayenerjifiyatlari-bsanli.ipynb](http://barissanli.com/calismalar/2022/tr_18ayenerjifiyatlari-bsanli.ipynb)

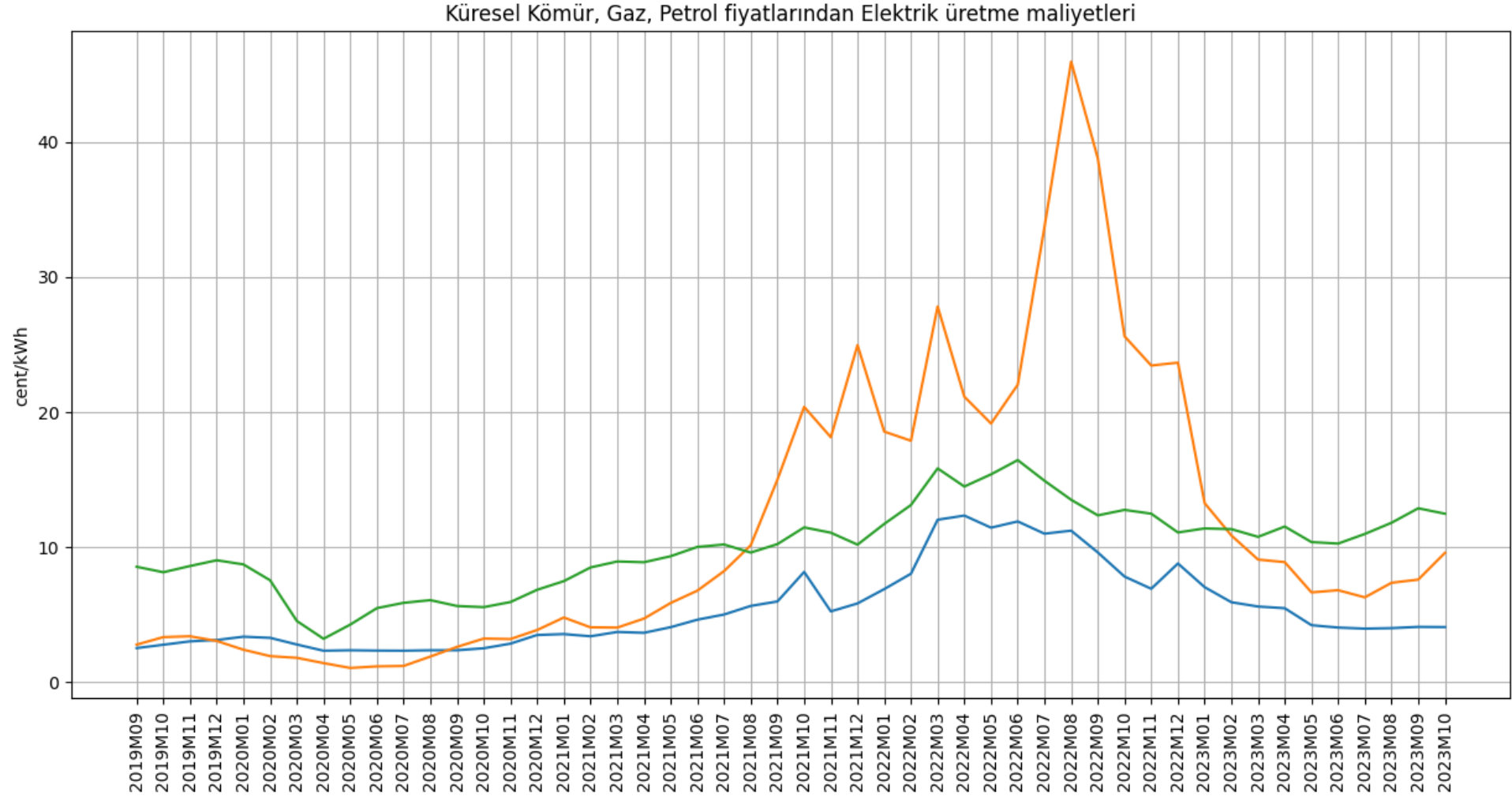
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# ICE Gelecek Fiyatlarına göre – Gerçek Değil

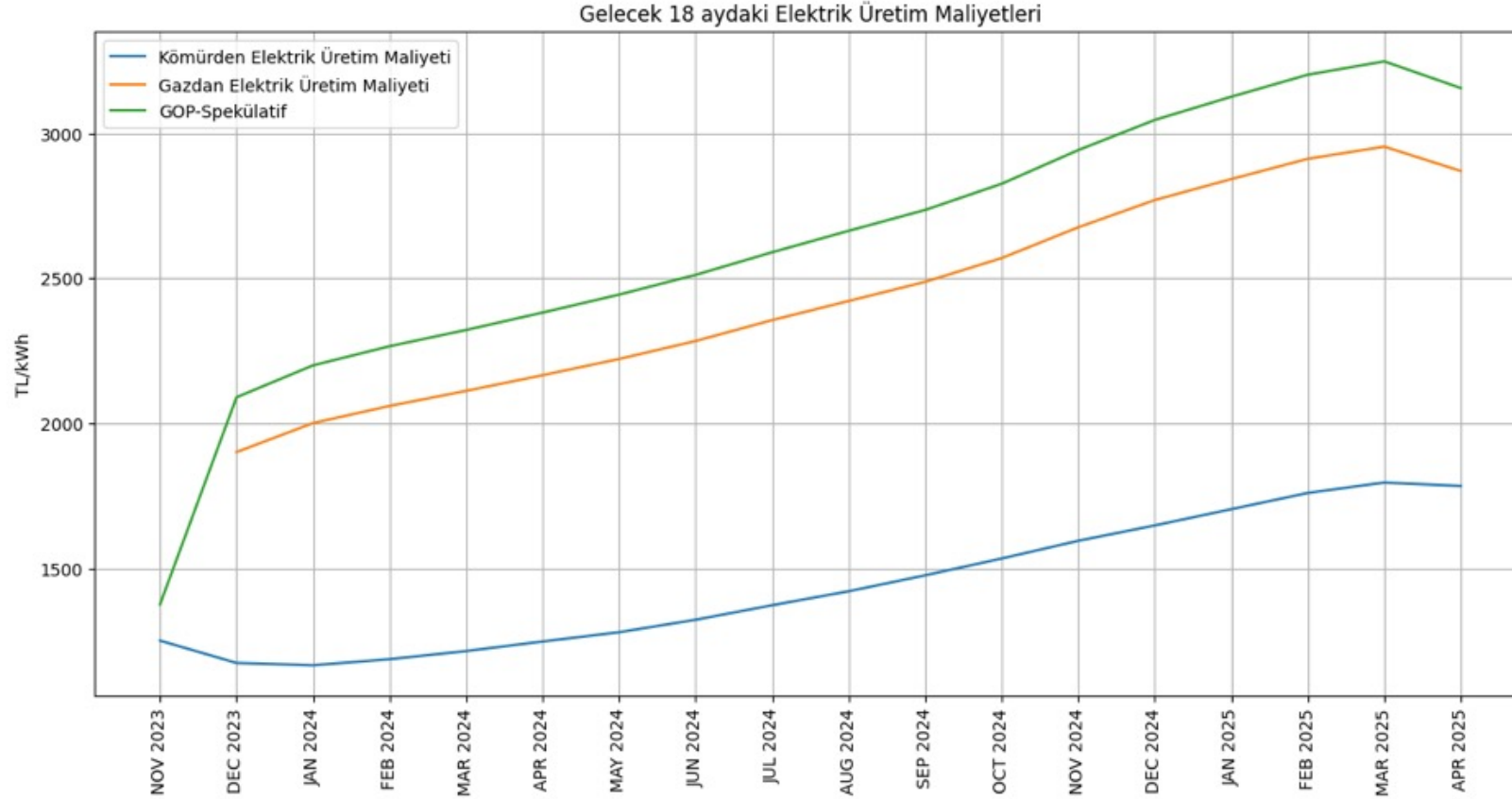


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# Küresel elektrik üretim maliyetleri



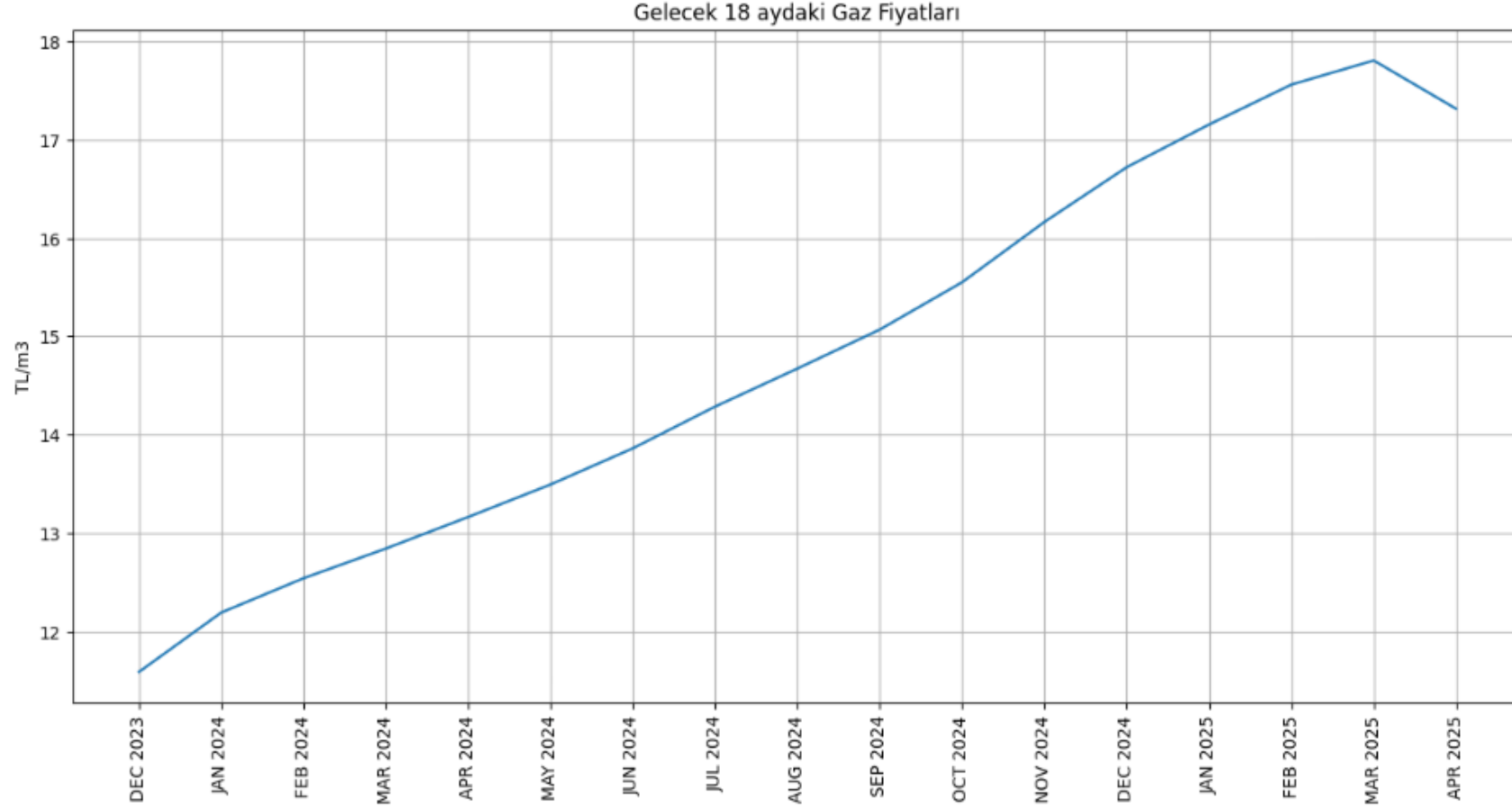
# ICE Gelecek Fiyatlarına göre – Gerçek Değil



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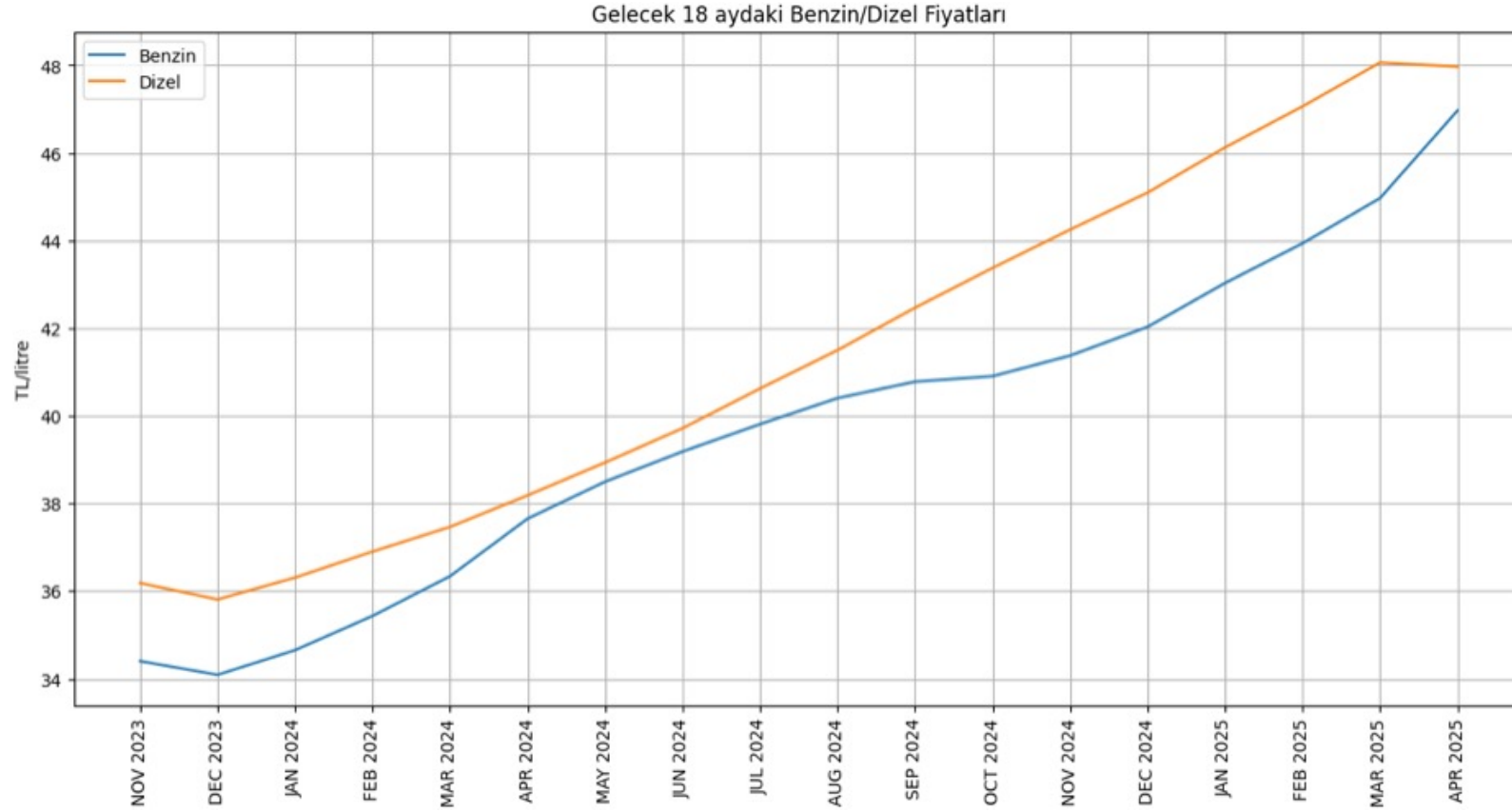
# ICE Gelecek Fiyatlarına göre – Gerçek Değil



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# Teşekkürler

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