

# Swedish Energy Day

Geopolitics and fundamentals - the key energy price drivers for 2024 and 2025

29<sup>th</sup> May 2024

# What we do



Market changes & energy strategies



Energy calculations & optimization



Project design & Environmental permits



Computer analysis & management



Construction & building development

# Where we are



**Stockholm**



**Göteborg**



**Västerås**



**Luleå**

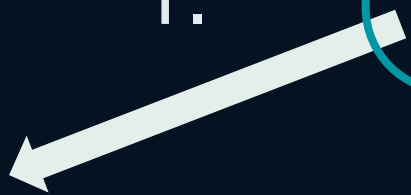


**Flexible**



**Dissect the Nordic  
Power prices**

1.



**The cost of  
carbon**



2.



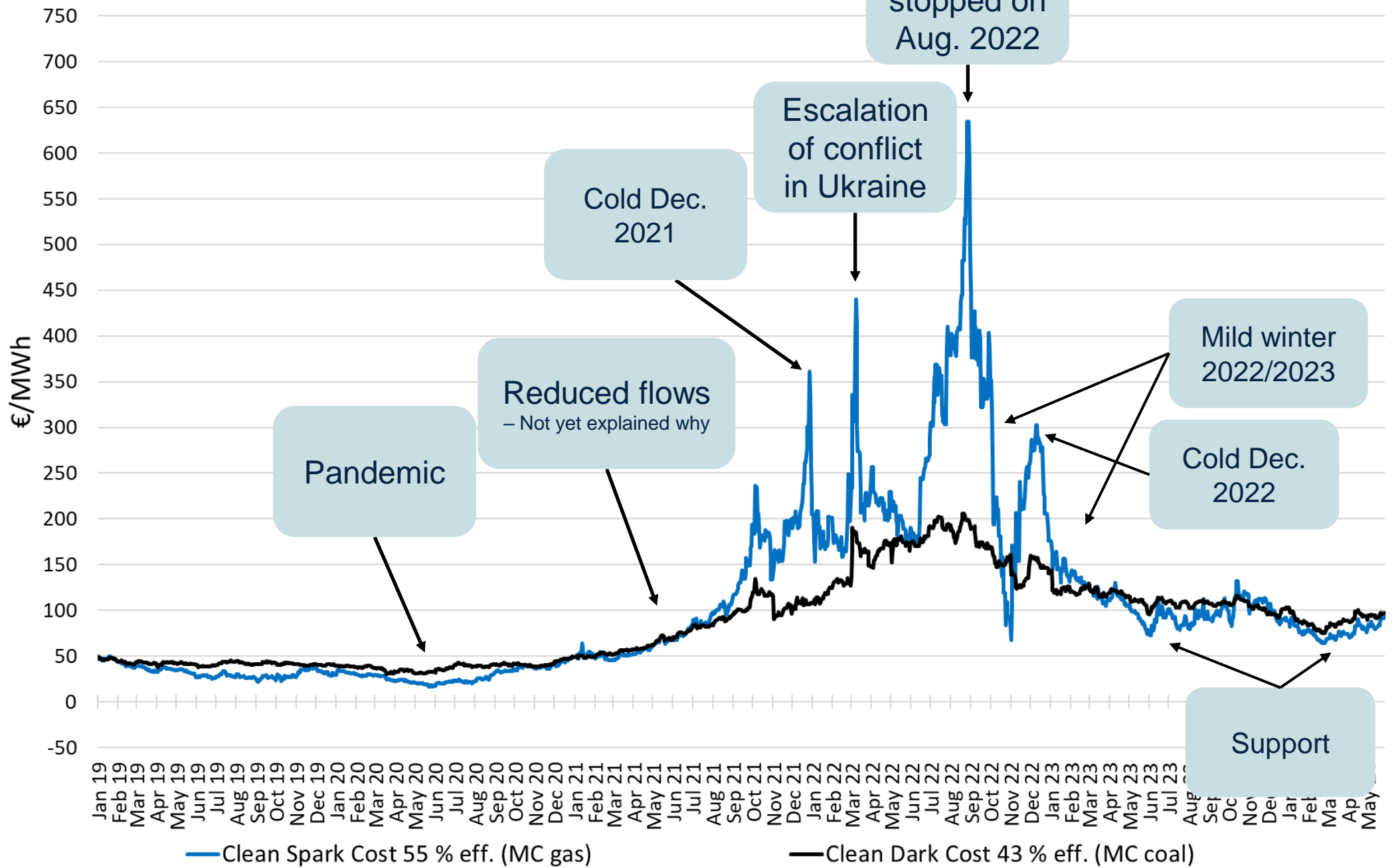
**Europe's  
gas crisis**

3.

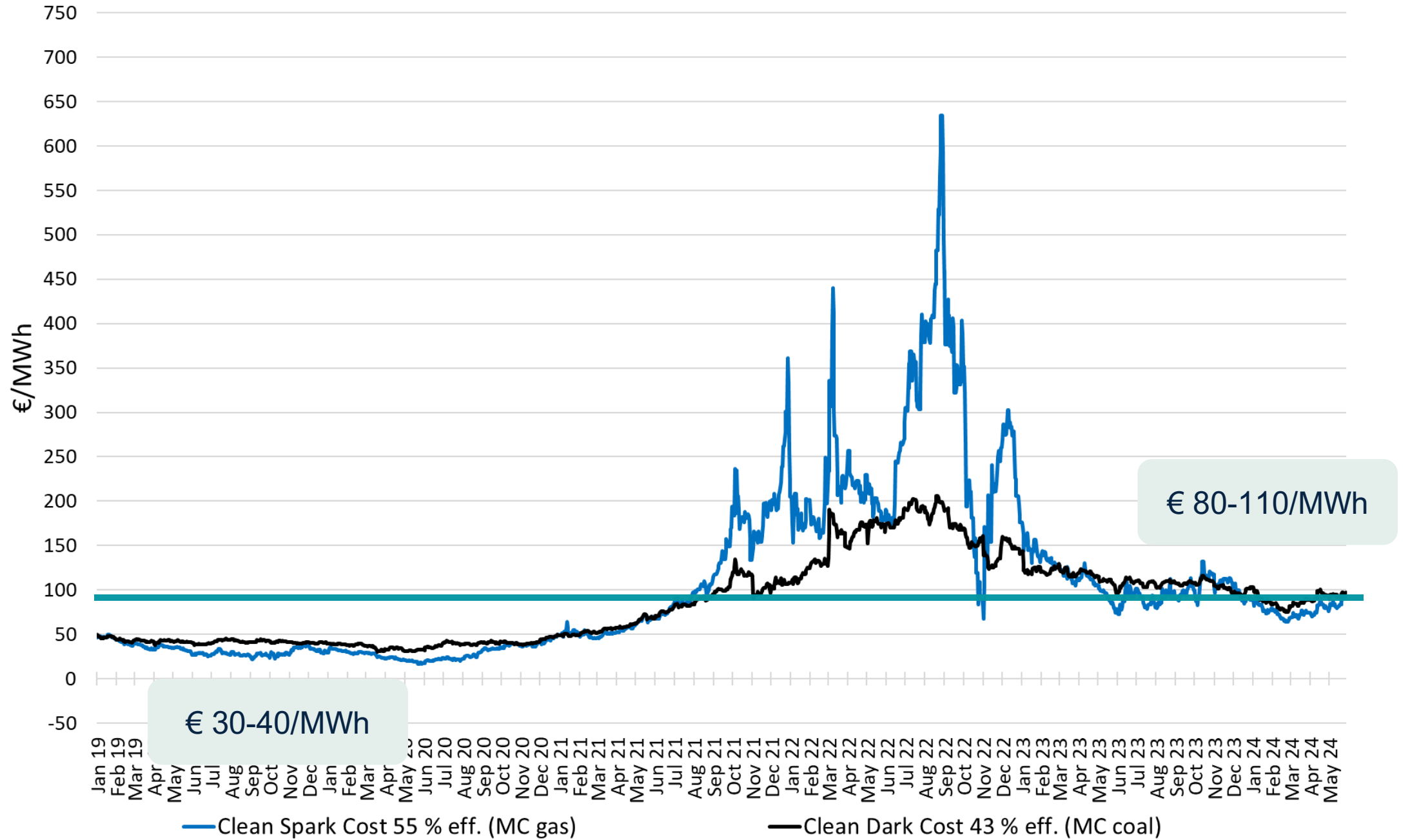


**Sweden's  
power balance**

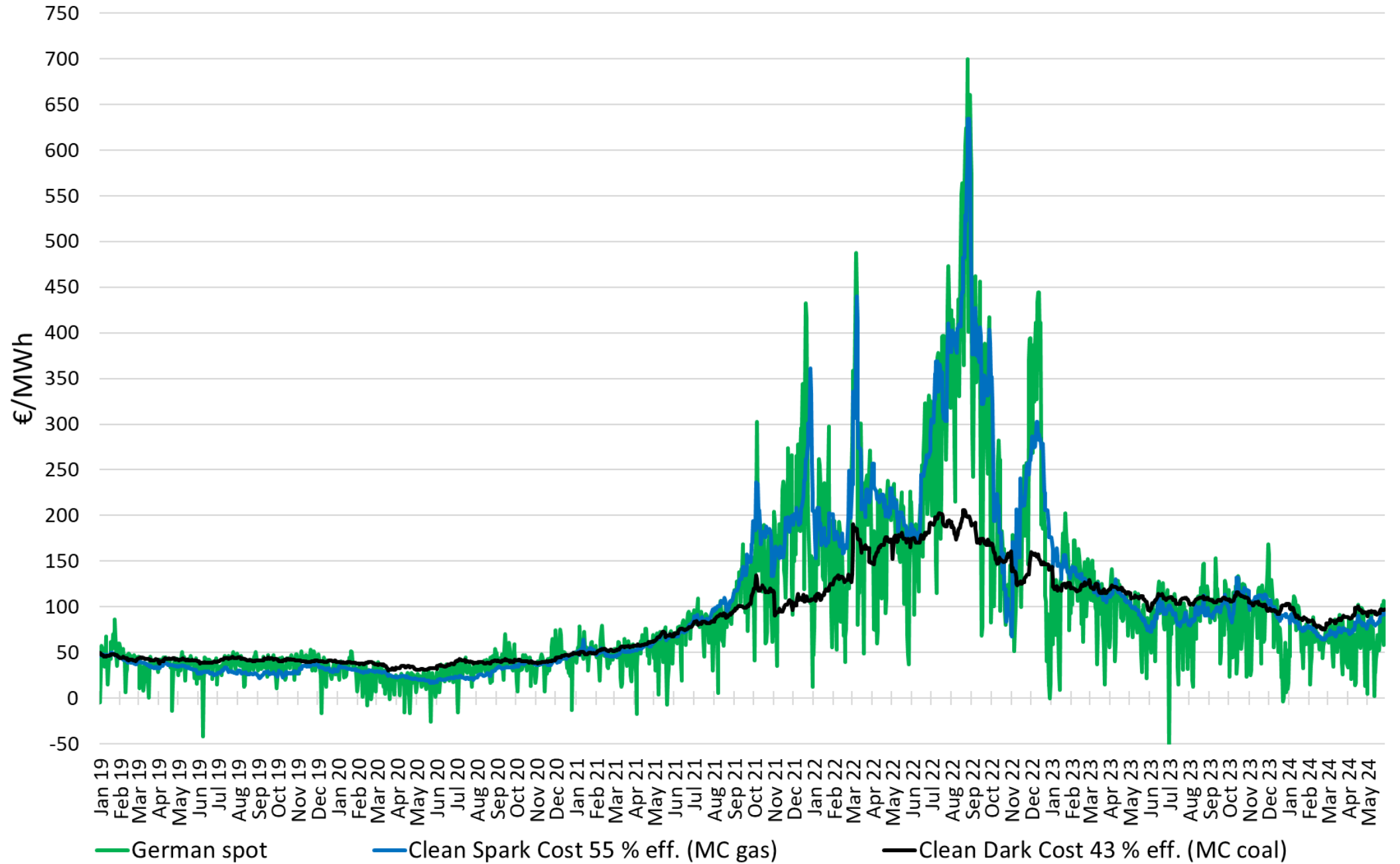
# Spot prices and marginal costs of gas power



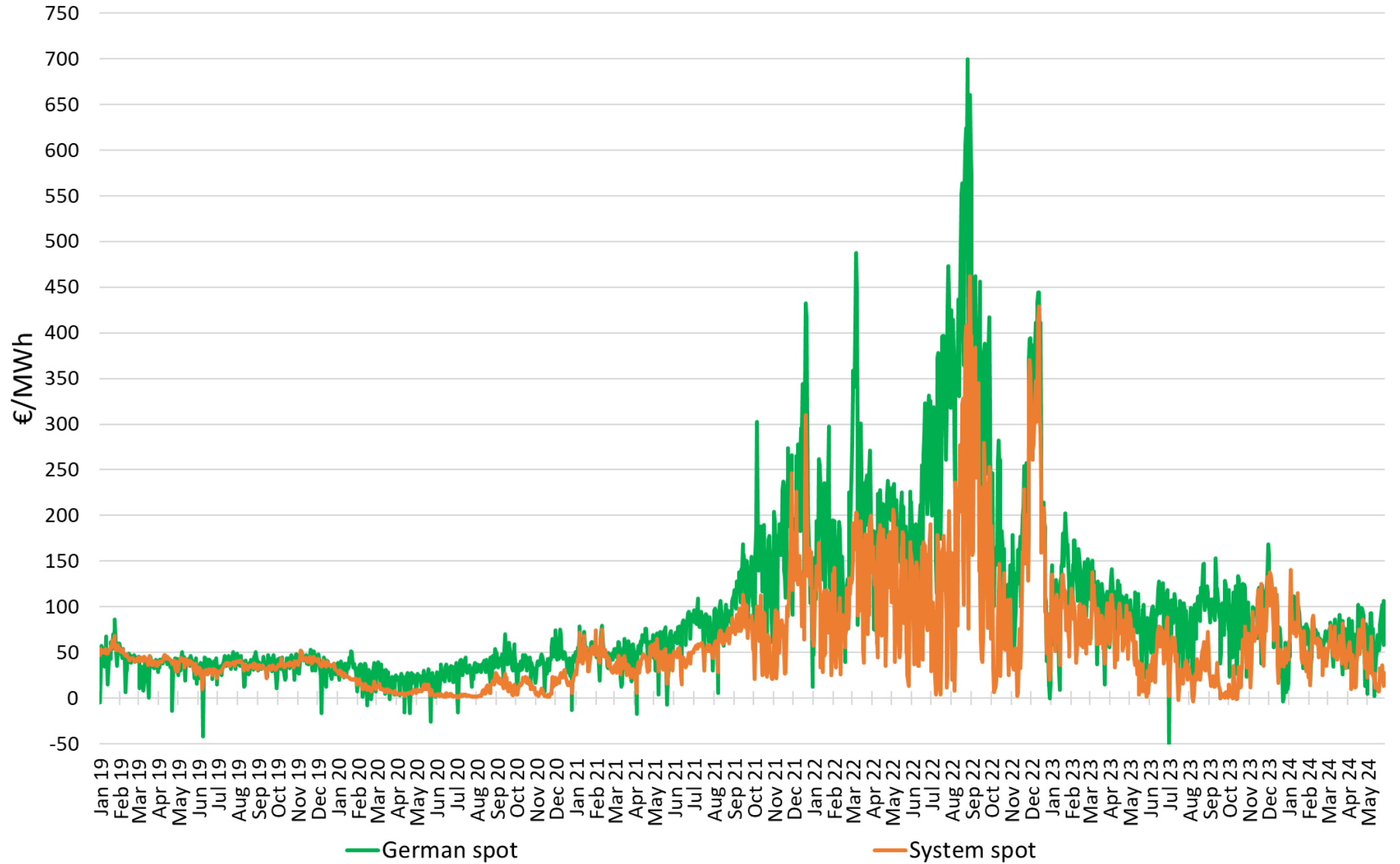
# Spot prices and marginal costs of gas- and coal power



# Spot prices and marginal costs of gas- and coal power

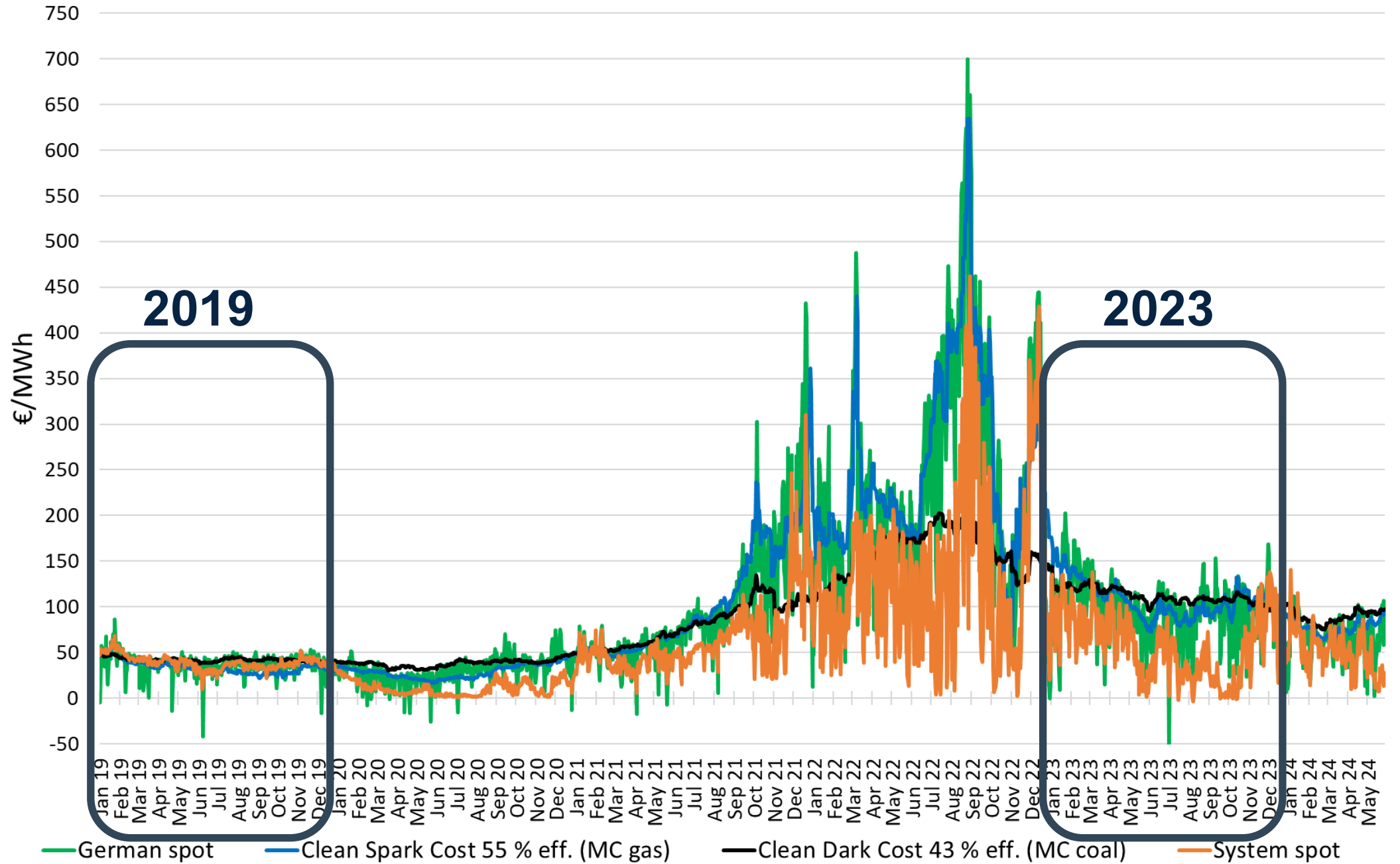


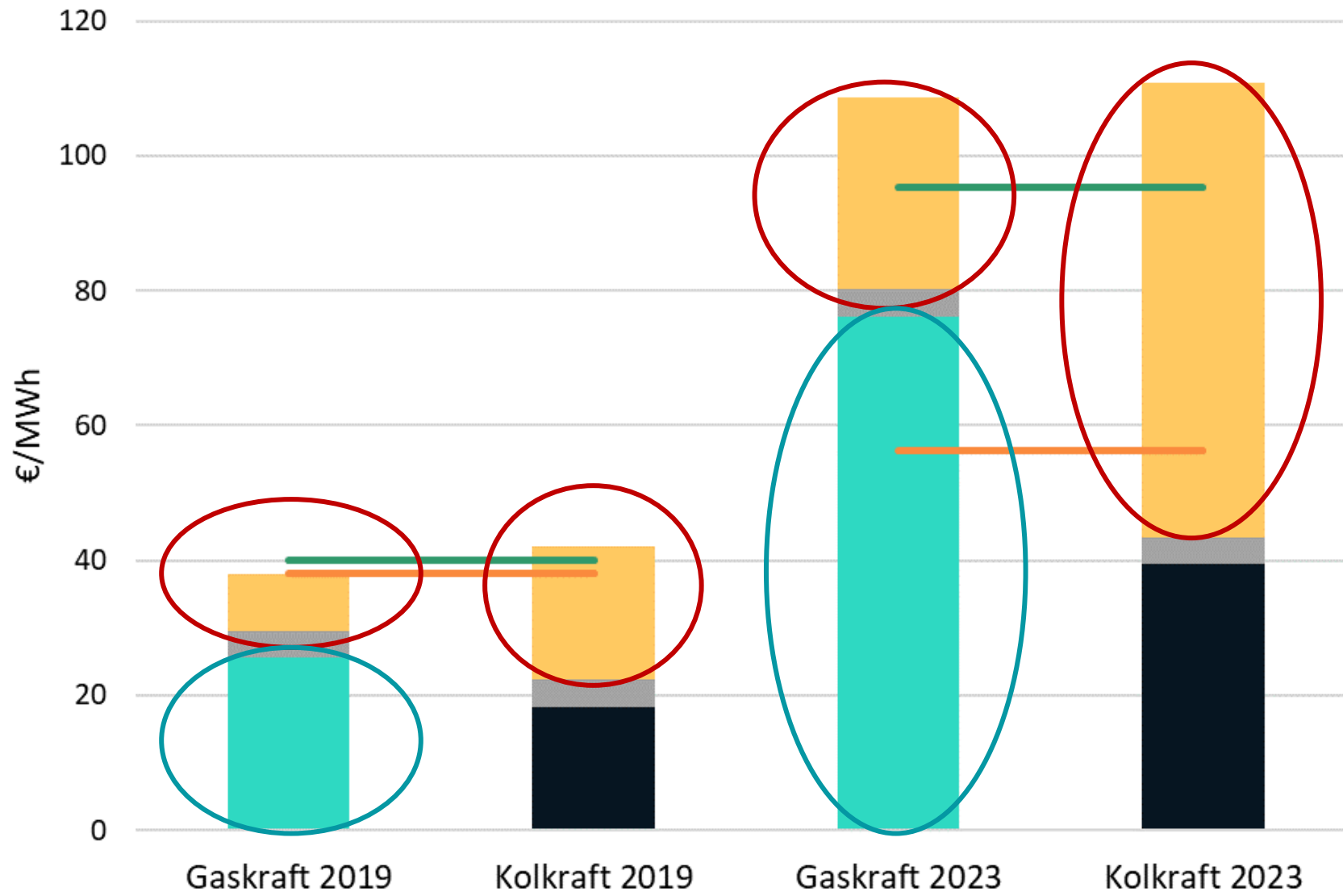
# Spot prices and marginal costs of gas- and coal power





# Spot prices and marginal costs of gas- and coal power





■ Bränsle gas   
 ■ Bränsle kol   
 ■ O&M   
 ■ Utsläppsrätter  
— Elpris Tyskland   
— Elpris Norden   
— Elpris Tyskland   
— Elpris Norden



## Dissecting the Nordic Power prices

1.



**The cost of carbon**



2.



**Europe's gas crisis**

3.



**Sweden's power balance**

# Emission allowance prices 2005-2023



100 EUR/ton  
20<sup>th</sup> February  
2023

Tightening  
reforms ETS  
2021-2022

No banking  
from phase 1 to 2

Excess supply  
financial crisis -08

Tightening  
reforms ETS  
2015-2017

Excess supply  
euro crisis

Up by x17  
in seven years

**Nordic system price 2019  
= € 39 /MWh**

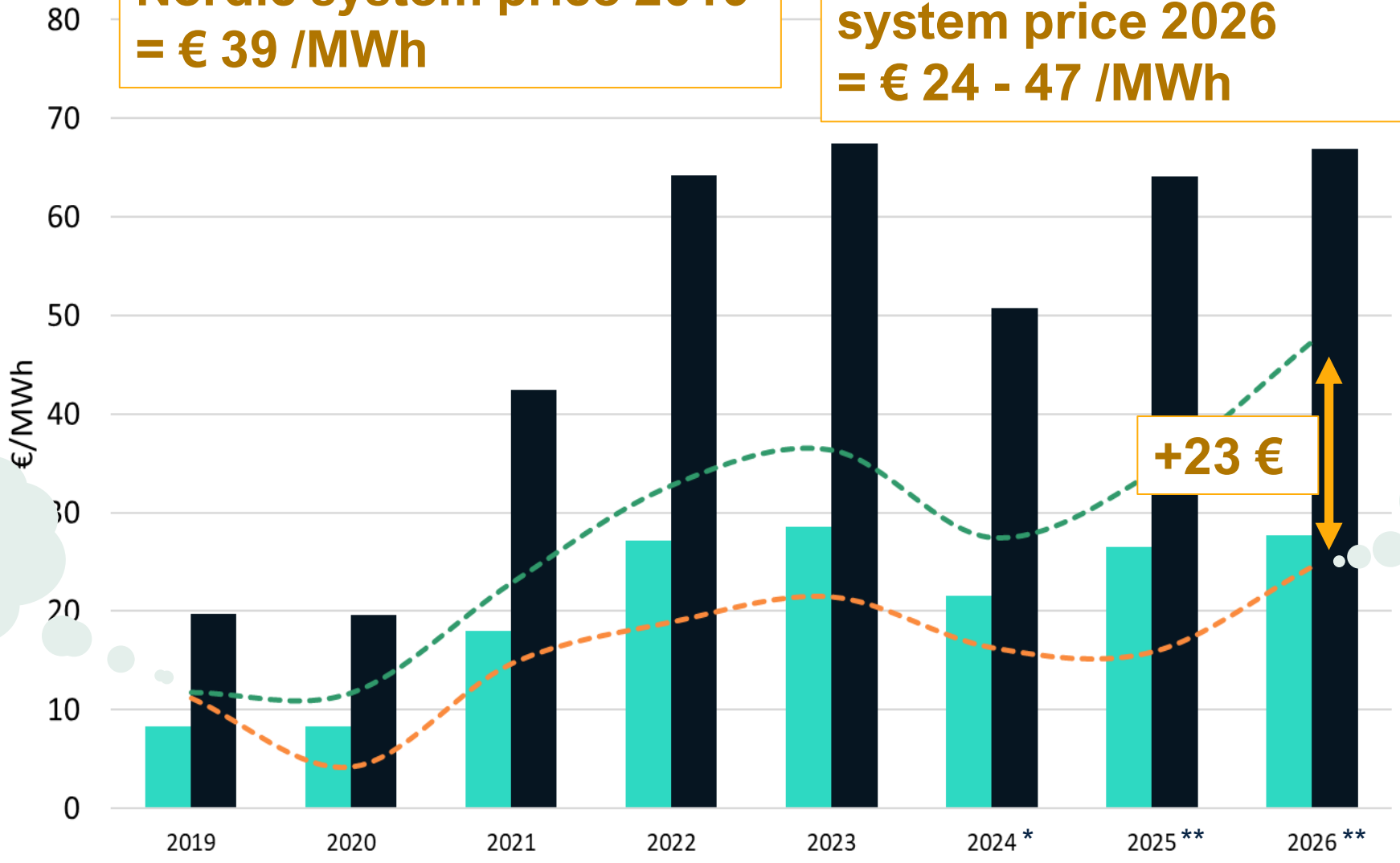
**CO2 component Nordic  
system price 2026  
= € 24 - 47 /MWh**

**€ 11  
/MWh**

**€ 47  
/MWh**

**€ 24  
/MWh**

**+23 €**



■ Carbon cost CCGT (55 %)  
- - - Carbon cost in European power

■ Carbon cost CP (42 %)  
- - - Carbon cost Nordic System

\* Year-to-Date  
\*\* Futures



## Dissecting the Nordic Power prices

1.



The cost of carbon



3.



Sweden's power balance



2.

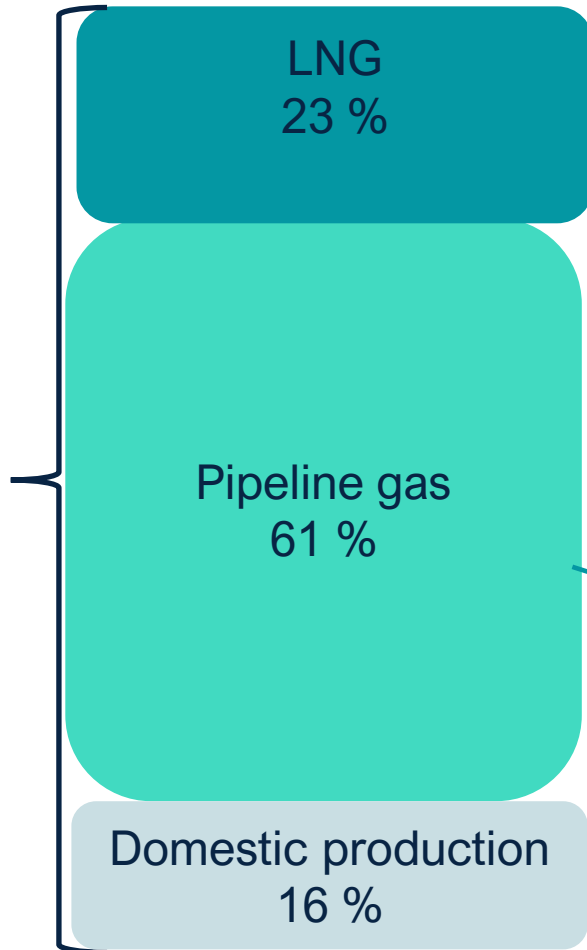


Europe's gas crisis



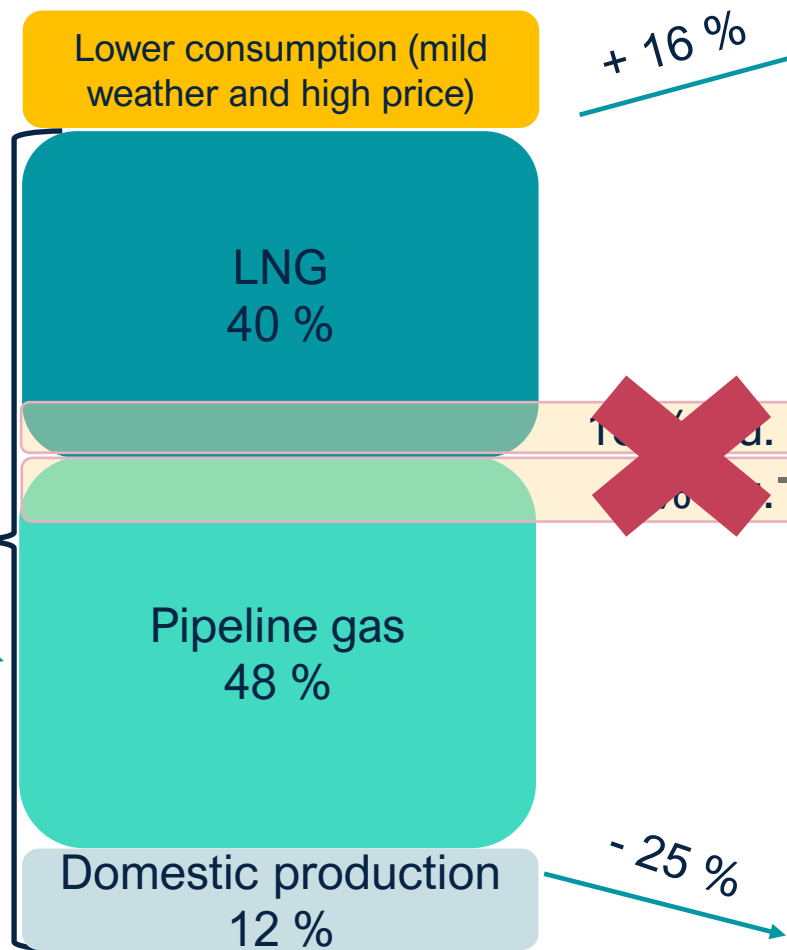
# Year 2019

Consumption 391 bcm  
(3 819 TWh)



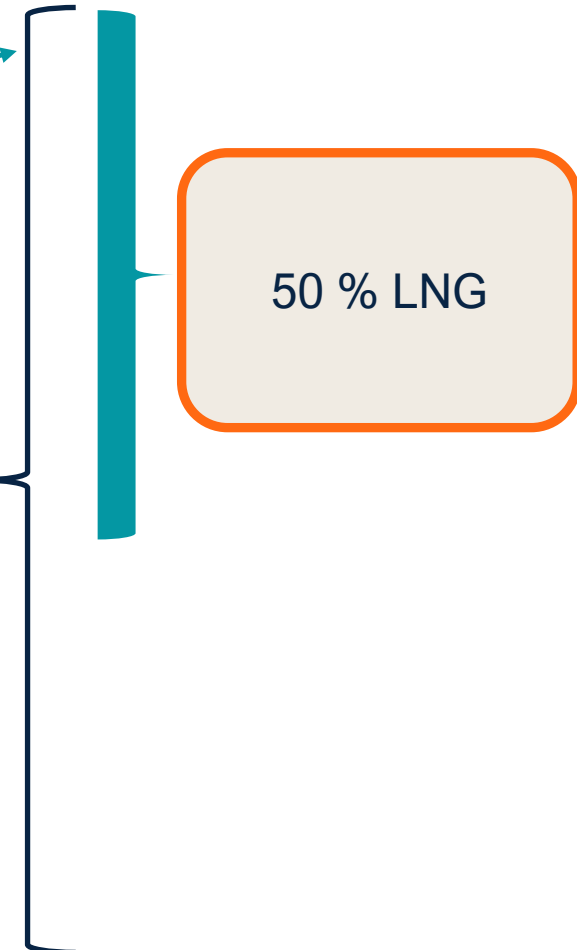
# Year 2023

Consumption 338 bcm  
(3 301 TWh)



# Year 2027

Consumption 391 bcm  
(3 819 TWh) \*



- 13 %

+ 74 %

- 22 %

- 25 %

+ 16 %

- 25 %

# What is the impact of shifting pipeline to LNG?

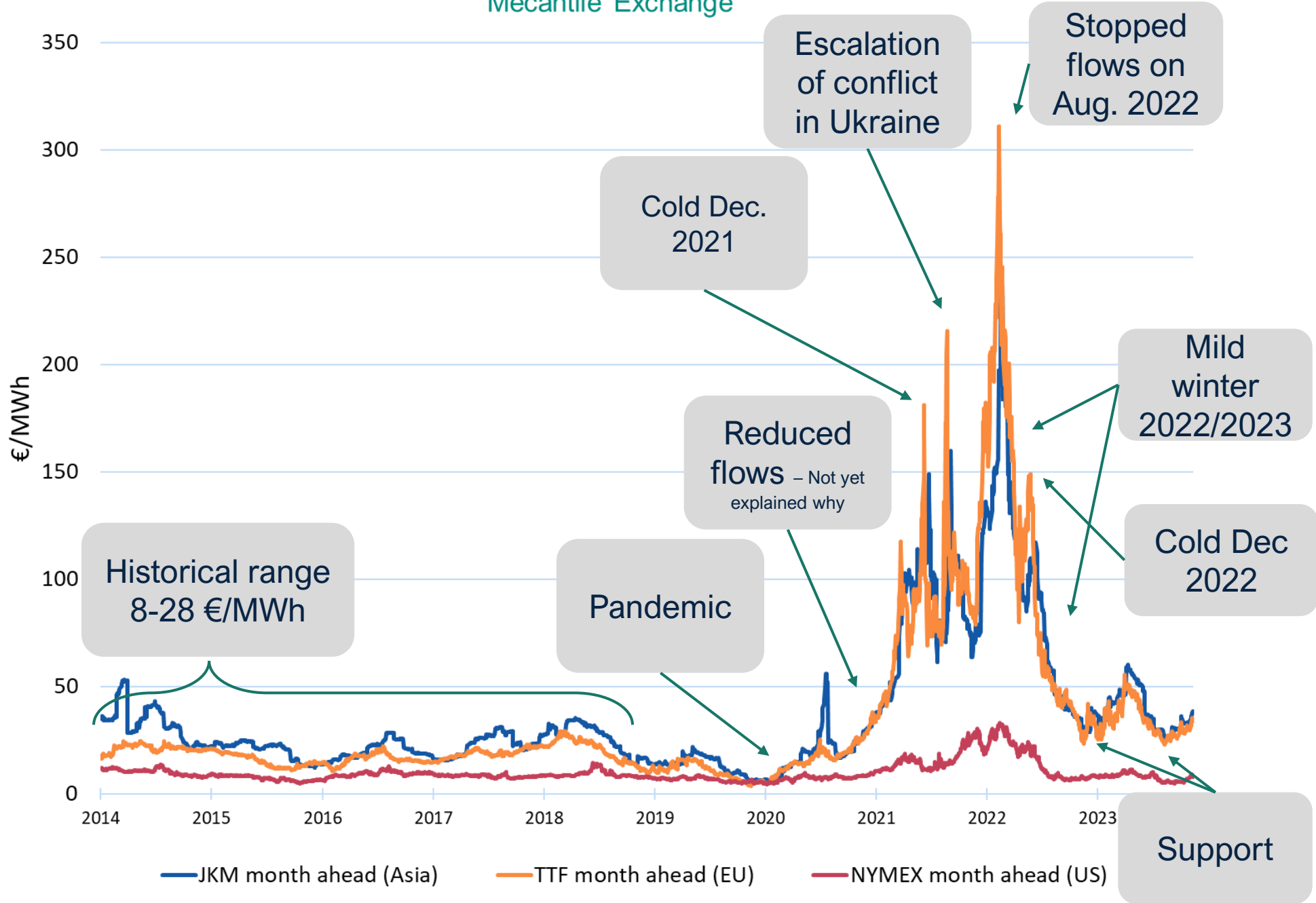


- **Long contracts** (25-30 years) with "secure", signed volumes only for Europe.
- European companies underwriting the contracts.
- Foremost one source (Russia) with large reserves and extensive infrastructure.
- Delivery A to B with "our" price.

- **Short purchases (spot)** of volumes originally intended for somebody else.
- China's and other buyers' contracts – We purchase on the second-hand market.
- A mosaic of import sources **including Russia!**
- Bids on a global market. Geopolitics.



# Global gas markets, Japan-Korean Marker, Title Transfer Facility and NY Mecantile Exchange





## Dissecting the Nordic Power prices

1.



The cost of carbon



2.



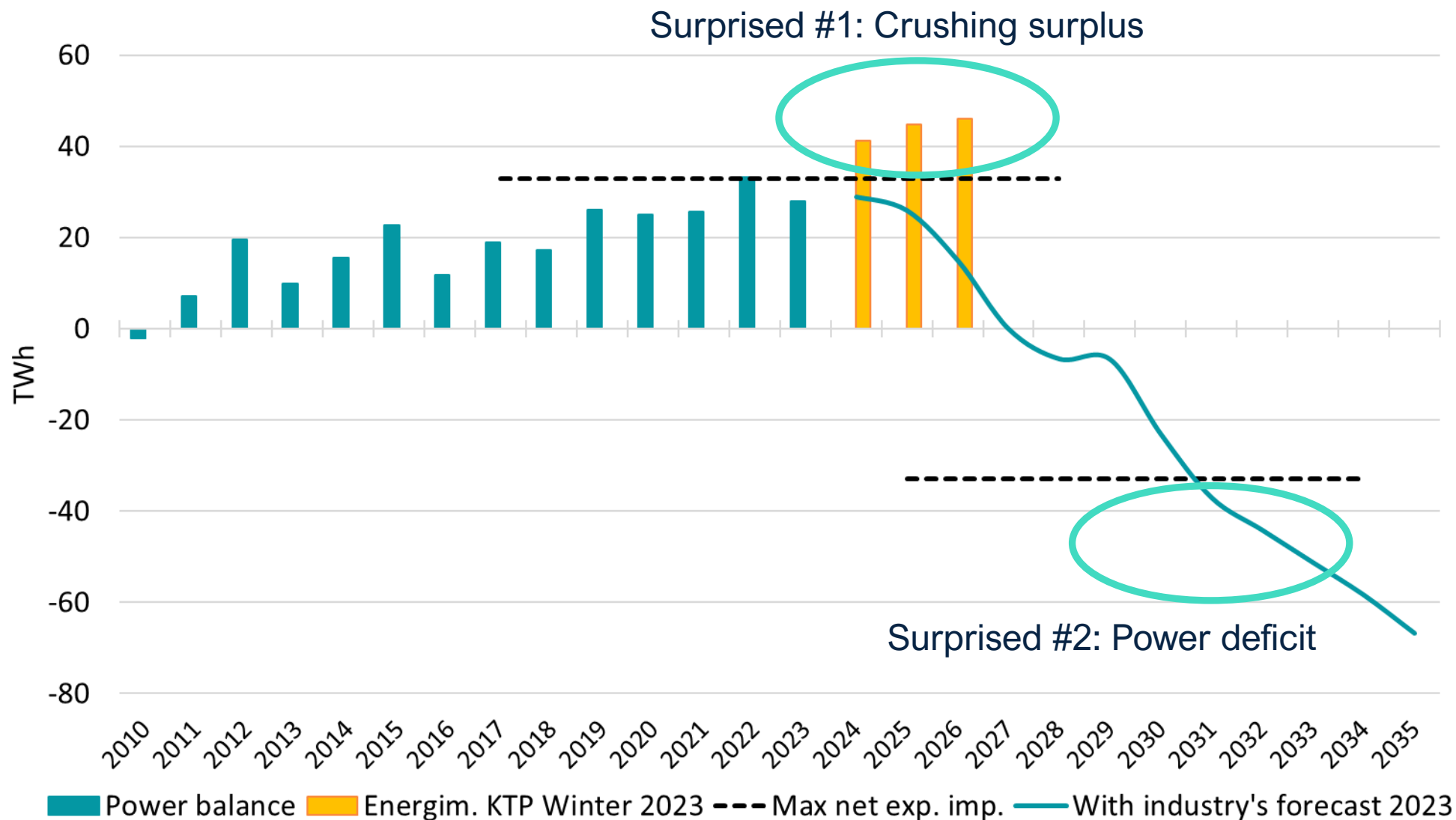
Europe's gas crisis

3.



Sweden's power balance

# Sweden's power balance



But the industries' plans are behind schedule.

8/10 electrification projects in North Sweden delayed.

The surplus is increasing. In the next years, too large for exports = at times very low prices.

**Now:**  
Too much power.

**In 8 years:**  
Not enough power for the industry.

"Whiplash effect"



## The cost of carbon



Emissions cause damages.

Therefore, we have put a price on emissions.

This price has increased up to x 17 in seven years.

Climate targets not reached.

## Europe's gas crisis



When is the crisis over?

*“When Russia is a democracy or Europe has found other energy sources.”*

**Alternatively**

*“Europe's gas fields suddenly refill”*

## Sweden's power balance



Sweden has a growing power surplus.

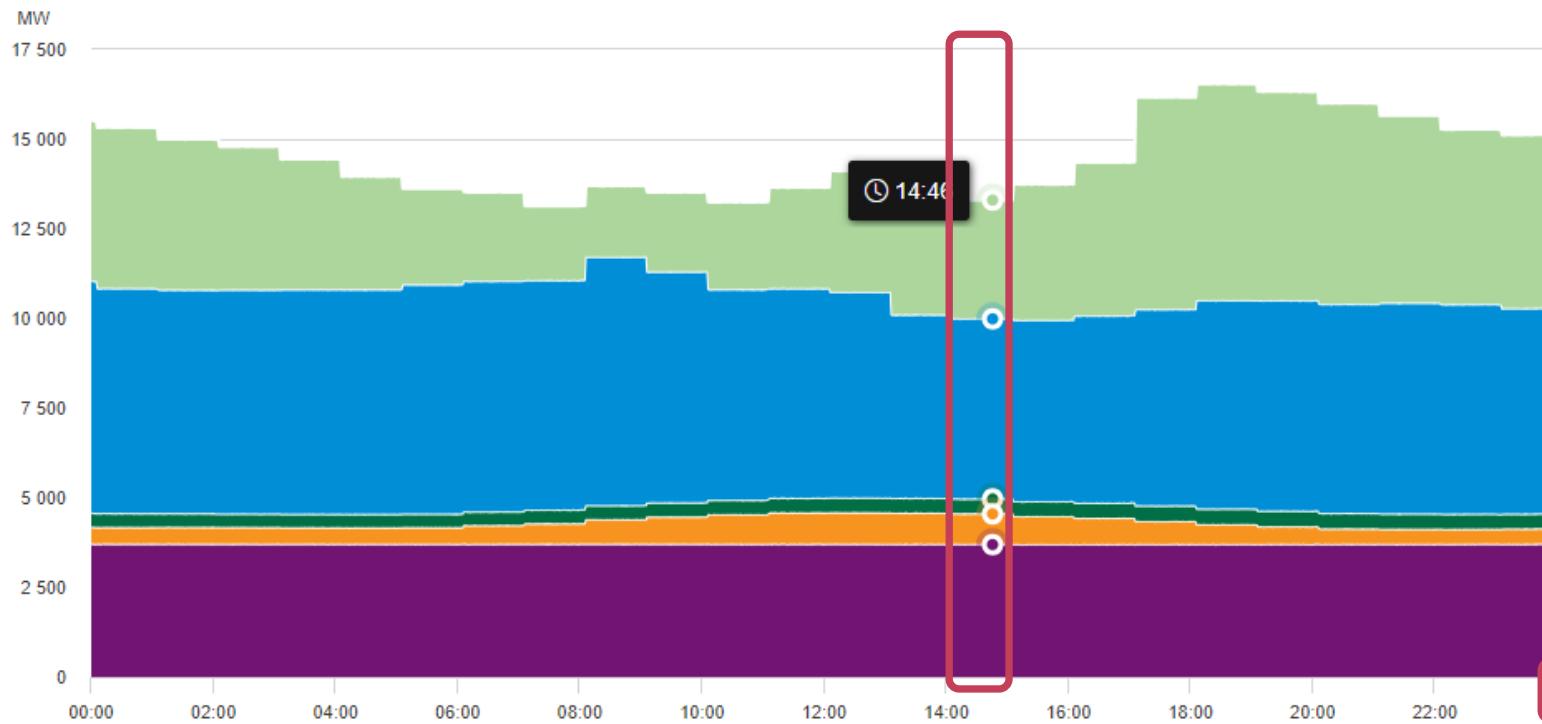
Consumption plans are delayed.

**Short term:** The surplus is crushing and might discourage new and existing generation.

**Within the decade:** The plan is still that consumption will increase and we soon will have a deficit.

# Question to discuss

## Power production 14:00-15:00



Delivery period (CET)	SE3 (EUR)	SE4 (EUR)
00:00 - 01:00	2,69	2,69
01:00 - 02:00	2,48	2,48
02:00 - 03:00	2,60	2,60
03:00 - 04:00	2,85	2,85
04:00 - 05:00	2,85	2,85
05:00 - 06:00	2,91	2,91
06:00 - 07:00	3,57	3,57
07:00 - 08:00	3,17	3,17
08:00 - 09:00	5,05	5,05
09:00 - 10:00	2,91	2,91
10:00 - 11:00	-0,03	-0,03
11:00 - 12:00	-0,18	-0,18
12:00 - 13:00	-2,06	-2,06
13:00 - 14:00	-7,41	-7,41
14:00 - 15:00	-15,07	-15,07
15:00 - 16:00	-10,00	-10,00
16:00 - 17:00	-3,79	-3,79
17:00 - 18:00	-0,06	-0,06
18:00 - 19:00	27,48	62,63
19:00 - 20:00	27,73	87,44
20:00 - 21:00	29,47	110,93
21:00 - 22:00	27,90	119,91
22:00 - 23:00	26,88	99,48
23:00 - 00:00	4,90	84,08
<b>Min:</b>	<b>-15,07</b>	<b>-15,07</b>
<b>Max:</b>	<b>29,47</b>	<b>119,91</b>
<b>Average:</b>	<b>5,70</b>	<b>23,21</b>

<p>Nuclear</p> <p><b>3 692 MW</b></p>	<p>Combined Heat Power (CHP)</p> <p><b>857 MW</b></p>	<p>Unspecified</p> <p><b>412 MW</b></p>
<p>Wind power</p> <p><b>3 317 MW</b></p>	<p>Total production</p> <p><b>13 302 MW</b></p>	<p>Total consumption</p> <p><b>9 797 MW</b></p>

Data for 2024-05-19  
From Statnet

**Thank you!**



[arne.bergvik@sigholm.se](mailto:arne.bergvik@sigholm.se)

