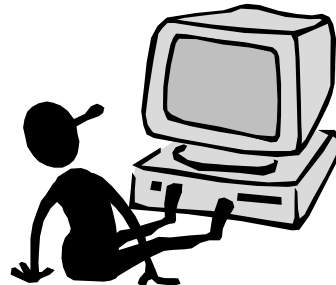


# Introduction

**Anders Plejdrup Houmøller, *Houmoller Consulting ApS***

- **In appendix 2, you'll find an explanation of the terminology used in this presentation.**
- **Concerning the documents referred to in this presentation:**
  - ✓ **You can download the documents at <https://houmollerconsulting.dk/facts-findings/>**
- **This presentation is animated**
  - ✓ **It's recommended to run the animation when viewing the presentation.**



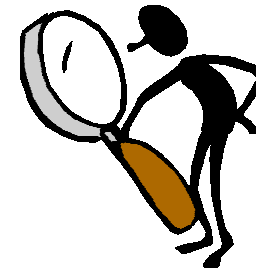
# The perfect storm in 2022

- **In 2022, Europe's electricity markets had a period of extremely high prices – and high price volatility.**
- **This was caused by a perfect storm:**
  - ✓ **The sudden loss of Russian pipeline gas.**
  - ✓ **A tight global gas market.**
  - ✓ **Reduced nuclear and hydropower production due to outages and drought.**



# Repairing the ships – 1

- After the turbulence in 2022, EU is currently considering reforming the electricity markets.
- The market coupling is to be improved by introducing a single Market Coupling Operator.
- ✓ The accompanying enhanced regulating, cost-effectiveness and transparency is good news for the energy consumers



- See the PowerPoint presentation *Single Market Coupling Operator*.

# Repairing the ships – 2

- **It is also being considered, if consumers should be encouraged to enter into long-term contracts.**
- **The well-intentioned plan is to reduce the consumers' price volatility**
  - ✓ **And to provide lower energy prices.**
- **The spot market's price volatility is extreme indeed**
  - ✓ **You may refer to the PowerPoint presentations**
    - ***Hungarian spot prices 2010-2023.***
    - ***Nordic System Price 1992-2023.***
- **Nevertheless, historically, long-term contracts have not been good for electricity consumers.**



# Long-term contracts are not good for consumers

- In the Nordic countries, many years of experience show the futures market for electricity has these features:
  - ✓ The futures market is not good at predicting the future spot prices.
  - ✓ The futures market has a strong tendency to over-shoot
    - Meaning: the estimates of the future spot prices are too high.
    - Consequently, on the average, entering into futures contracts is expensive for consumers.
  - ✓ The futures market's price volatility is as extreme as the spot market's price volatility
    - If you enter into a futures contract: the price of the contract will vary greatly, depending on when you enter into the contract!
      - Hence, long-term contracts offer no escape from the electricity market's price volatility.
- The year 2022 shows these features are magnified during periods of turbulence. Please see appendix 1.

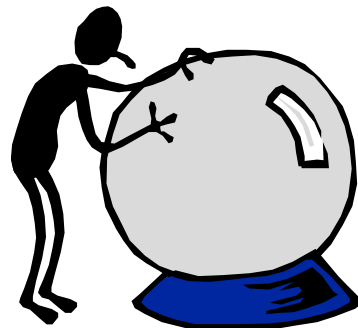
# Appendix 1

## German forward prices for electricity



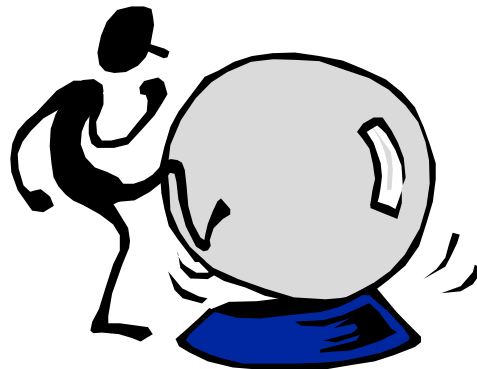
# Estimating the future prices for electricity

- **This appendix presents the market's estimates of the future whole-sale prices for electricity**
  - ✓ **The so-called *spot prices*.**
- **This appendix discusses the German prices.**
- **The German prices constitute a benchmark for Continental Europe because:**
  - ✓ **Germany is Europe's biggest and most liquid electricity market.**
  - ✓ **Germany has a central position with electrical connections to 11 other countries.**



# German forward prices for electricity – 1

- **At the next slide, the green curve shows the market's estimates of the average German spot price for the first quarter of 2023 (Q1-2023)**
  - ✓ **The green curve shows the estimates made from 7 October 2022 to the end of December 2022.**
- **This slide – and the following, similar slides – illustrates the features of the futures market listed at slide no. 5.**





# German forward prices for electricity – 2

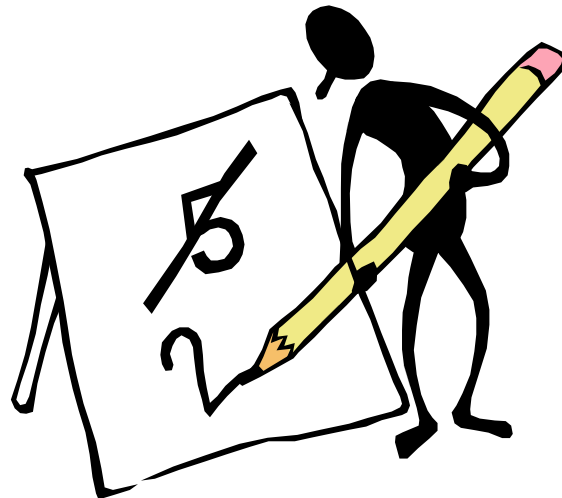
## For the first quarter of 2023

€/MWh



# German forward prices for electricity – 3

- **At the next slide, the green curve shows the market's estimates of the average German spot price for the second quarter of 2023 (Q2-2023)**
  - ✓ **The green curve shows the estimates made from 7 October 2022 to the end of March 2023.**



# German forward prices for electricity – 4

## For the second quarter of 2023

€/MWh



**Average German spot price Q2-2023: 92.3 €/MWh**

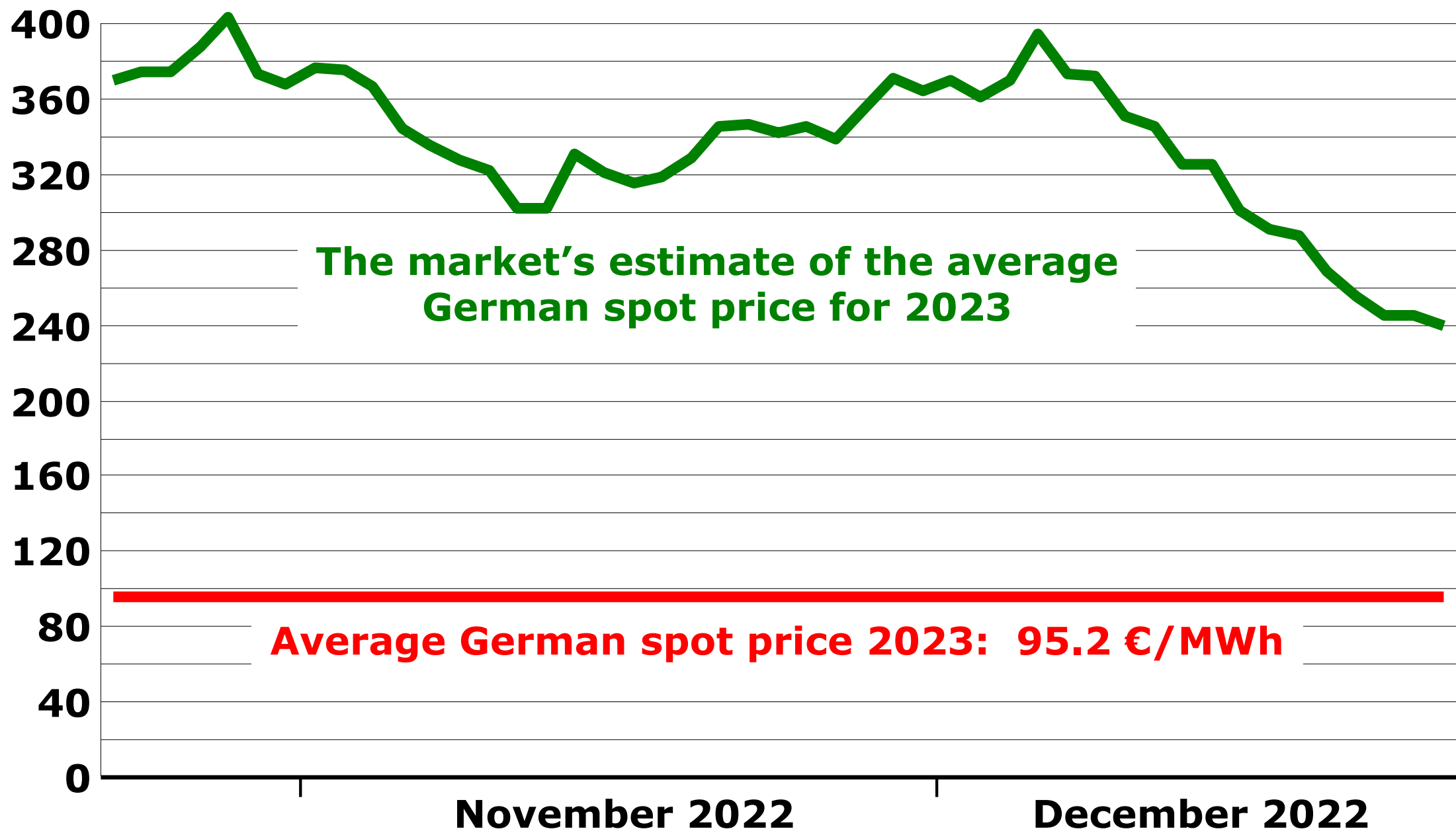
# German forward prices for electricity – 5

- **At the next slide, the green curve shows the market's estimates of the average German spot price for the year 2023**
  - ✓ **The green curve shows the estimates made from 24 October 2022 to the end of December 2022.**



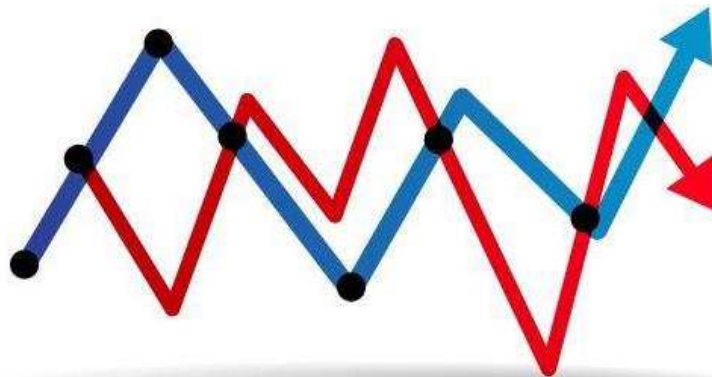
# German forward prices for the year 2023

€/MWh



# German forward prices for electricity for the years 2024 and 2025

- The two following slides further illustrate the futures market's price volatility.
- For each slide, the green curve shows the market's estimates of the average German spot price for the year 2024 and 2025, respectively
  - ✓ The green curve shows the estimates made from 24 October 2022 to 14 July 2023.
- The lesson: if you enter into a fix-price contract for one of the years 2024 or 2025
  - ✓ Then the contract's fixed price will vary wildly
    - Dependent upon when you enter into the contract.



# German forward prices for the year 2024

€/MWh

300

280

260

240

220

200

180

160

140

120

100

80

60

40

20

0

The market's estimate of the average German spot price for 2024

Nov

Dec

Jan

Feb

Mar

Apr

May

Jun

Trading days 2022-2023

# €/MWh German forward prices for the year 2025



The market's estimate of the average German spot price for 2025



# More information

- **For more information, see the PowerPoint presentations**
  - ✓ ***Financial prices and spot prices – annual contracts 2002-2017.***
  - ✓ ***Financial prices and spot prices – quarter contracts 2006-2017.***
- **These presentations give you the experiences from the Nordic market for power derivatives.**

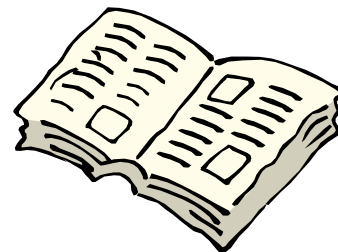


# Appendix 2

## Terminology

- ***Forward price*** The price of a futures contract. See **Wikipedia *futures contract***.
- ***Futures market*** See **Wikipedia *futures contract***.
- ***Market coupling*** See the PDF document ***The Liberalized Electricity Market*** and the PowerPoint presentation ***Unbundling and EU's Single Electricity Market***.
- ***Power derivative*** See the PDF document ***The Liberalized Electricity Market***.
- ***Spot price*** See the PowerPoint presentation ***Maximizing the economic value of market coupling and spot trading***.

**You may also refer to the PDF document *The Liberalized Electricity Market*.**



# **Thank you for your attention!**

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