

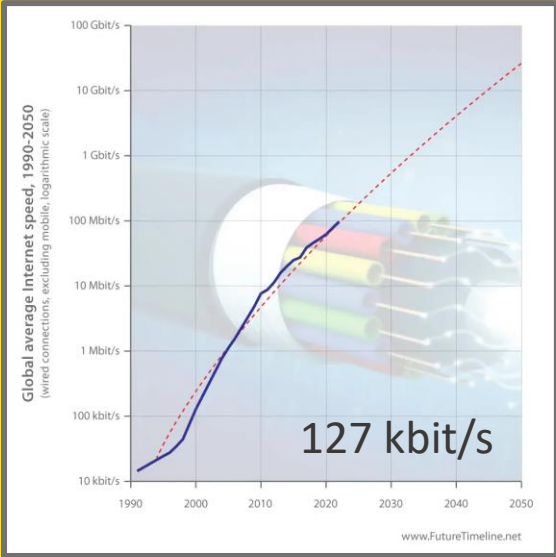
Will energy trading ever be the same again?

NO!

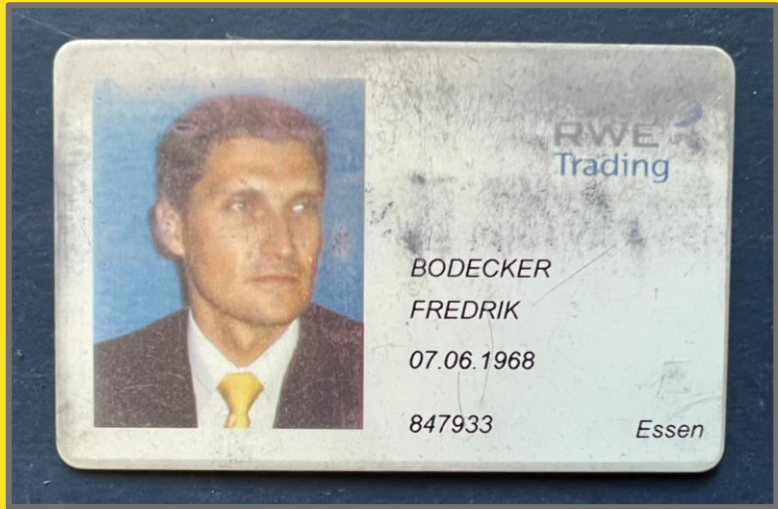


“Everything changes but change itself. Everything flows and nothing remains the same. You cannot step twice into the same river, for other waters and yet others go flowing ever on.”

*Heraclitus (535 BC – 475 BC)*



2000





Will German energy trading ever be the same again?



# The Hydrogen Hallelujah



# The PPA Party

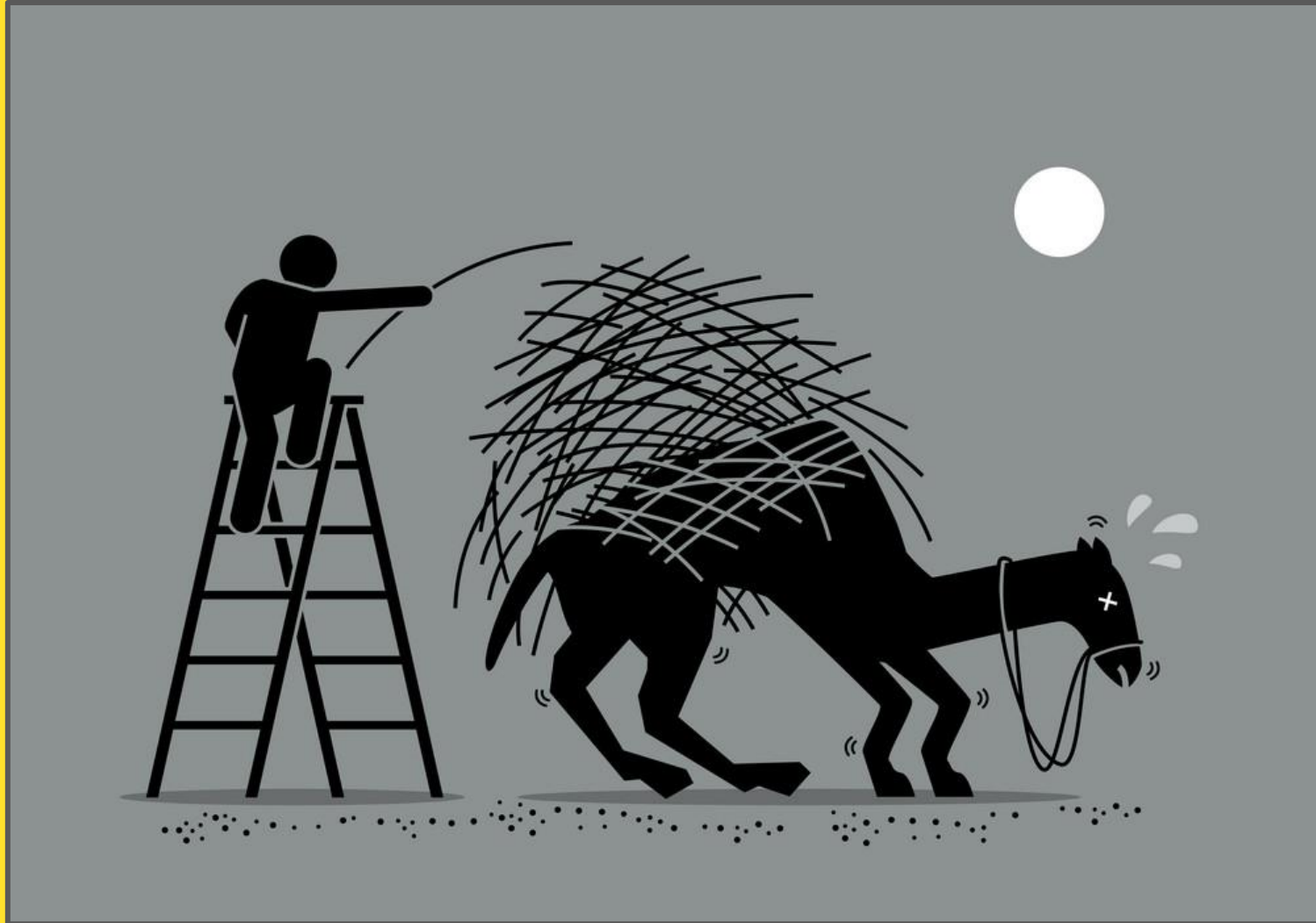


# Government intervention!



## Is it too much this time?







“This is the way”

“Hydrogen is the way”



# Electrolyzers, electrolyzers, everywhere electrolyzers!

The European Commission's REPowerEU program seeks to ~~double the EU's 2020 domestic renewable hydrogen production target to 10 million mt/year, requiring in the region 80 GW of electrolysis, with an additional 10 million mt/year in imports.~~ REPowerEU is designed to make the EU independent from Russian fossil fuels well before 2030, in response to Russia's Feb. 24 invasion of Ukraine.

The UK has followed suit, doubling its low-carbon hydrogen production target to 10 GW by 2030, with half of this from electrolysis.

Public money is starting to flow. The EU has approved the first 13 billion euros (\$13.7 billion) of the 430 billion euros (\$450 billion) promised under its 2020 Hydrogen Strategy and is now working to launch a "Hydrogen Bank". The US Inflation Reduction Act (IRA) provides a ten-year tax rebate per kilogram of green hydrogen worth \$3, which will soon be more than the production cost itself. Free hydrogen anyone?

# 90+ GW electrolyzers in 2030....

1. Where will all the power come from?



2. => Variable power from wind and solar no longer a problem! (Or?)

# How will all that power be nominated?

Will the large owners of variable weather driven production start acting as energy traders?

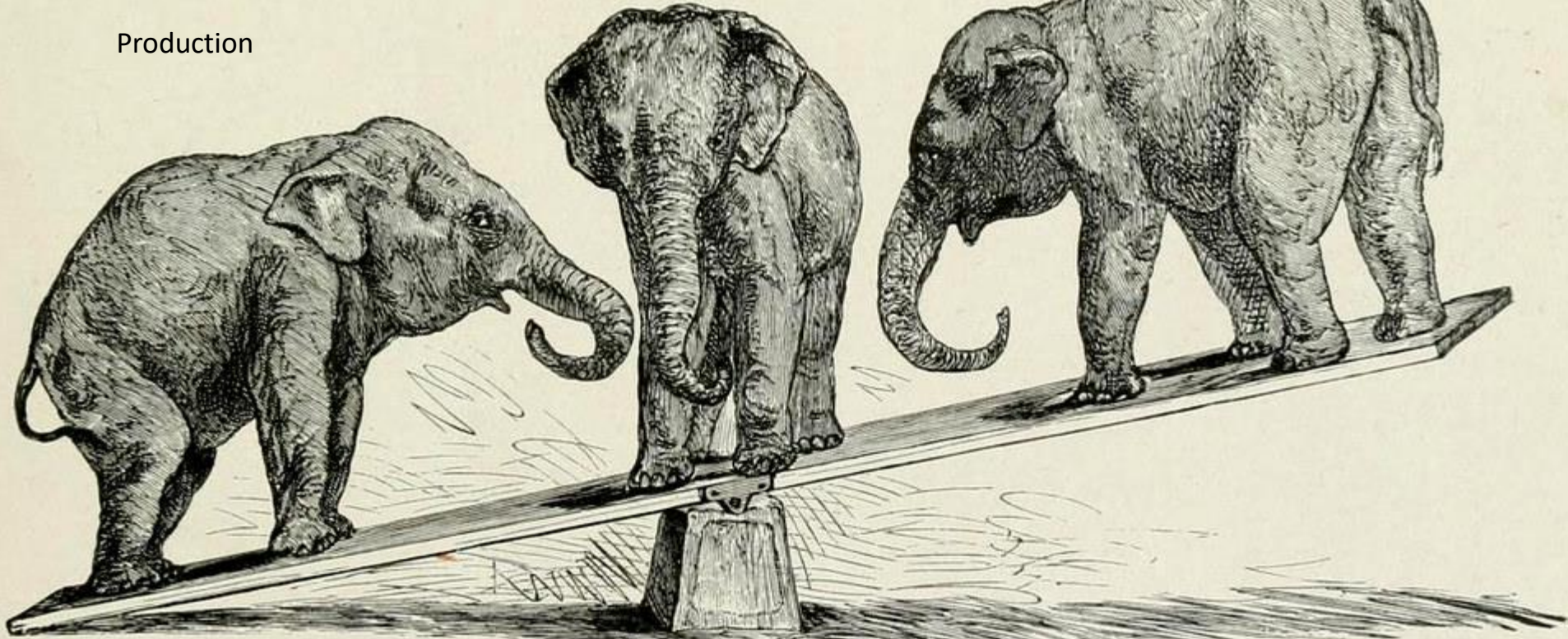




Production

Grid, flexibility &  
storage

Consumption



*J.W. Beard Del.*

TRAINED BABY ELEPHANTS PLAYING SEE-SAW.

# Is the PPA Party over?





Is it time to  
reconsider the PPA  
halleluja moment?



The mega church of PPA worshippers





The excessive risk taking of the banks caused the regulation and the draconian demands for collateral that made life hard for the energy trading markets

Ironically, it was the banks that profited on being the few left who could meet the new stronger demands.



But they didn't stop there...

# Why has PPAs been so successful?

Long-term price

Supporting renewable energy

Customization

Credit => lower demands for guarantees

Regulatory incentives-support schemes

# Why have PPAs been so terrible ?

Pay as produced => monthly profiles => large losses



Long complex contracts => time consuming and expensive



Rigid and very hard to ammend

No one can anticipate and protect the parties over 10-15 years in this changing market/environment

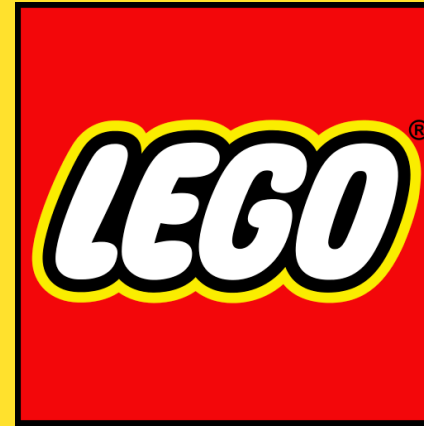


Something that is supposed to hold for a long time cannot have too many complicated parts that can break

You need basic building blocks!



PPAs have been too complicated and too customized!



You need basic building blocks!



Back to basics!

The financial standard  
contracts at EEX and  
Nasdaq.

If necessary, in combination with a  
floating price long- term contract for  
physical delivery

*Call it a PPA if you must (it used to be called an  
agreement for purchasing power)*



# Financial contracts

Why has PPAs been so successful?

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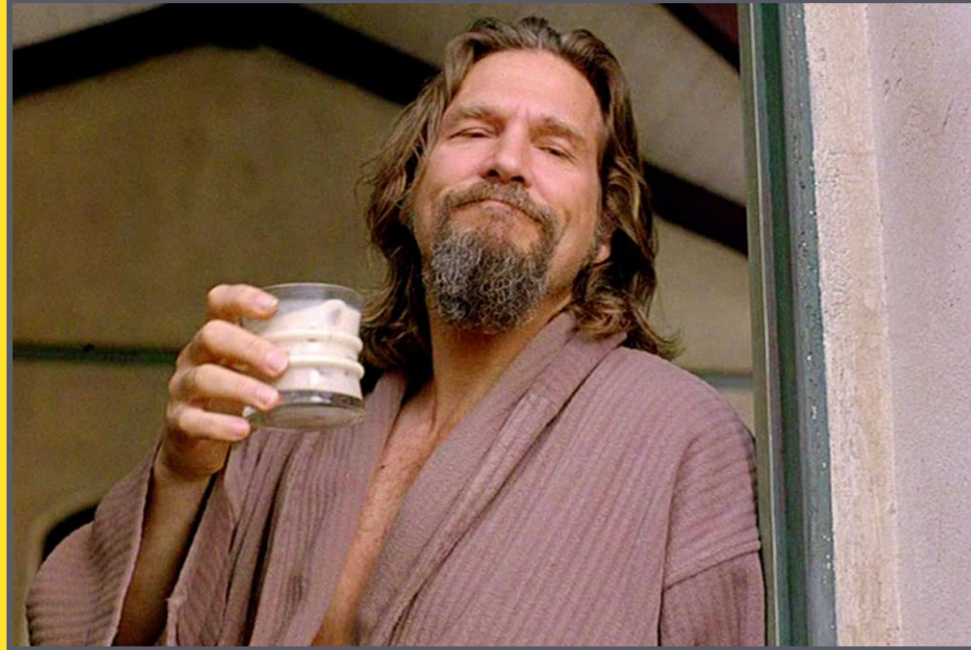
Regulatory incentives-support schemes

10 years are listed at EEX and Nasdaq – Start trading them for f\*\*ks sake!

Use the floating price physical delivery contract for that

What can be more customized than combos of standard contacts?

Stop promoting PPAs, ease up on the rules for guarantees and assist to solve it!

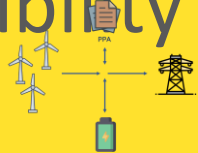


We tend to forget our  
hangovers...



1. Government (EU) intervention
2. Green deal, IRA, etc (hydrogen hype)
3. PPAs and [Government] CfDs.



1. More renewable investors active in RRM
2. Storage and flexibility 
3. Solution to credit risk/guarantees/collateral



write a haiku about the german energy market and include PPA



write a haiku about the german energy market and include PPA and nuclear power

Thank you!