

Cheap Power, Major Consequences: Breakthrough Auction Prices and the Future of the Energiewende

[Strommarkttreffen]

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BRIEF PROFILE:



Toby Couture is Founder and Director of E3 Analytics, an international renewable energy consultancy based in Berlin that focuses on renewable energy markets, policy, and finance. He has worked with over forty countries around the world on the economic, financial, and policy aspects of renewable energy development, including in Asia, the Pacific region, the Middle East, Africa, and the Americas.

Unsubsidized solar

- March 2016,
Mexico:
USD 3.6 c/kWh

- August 2016, Chile:
USD 2.91 c/kWh



Unsubsidized solar

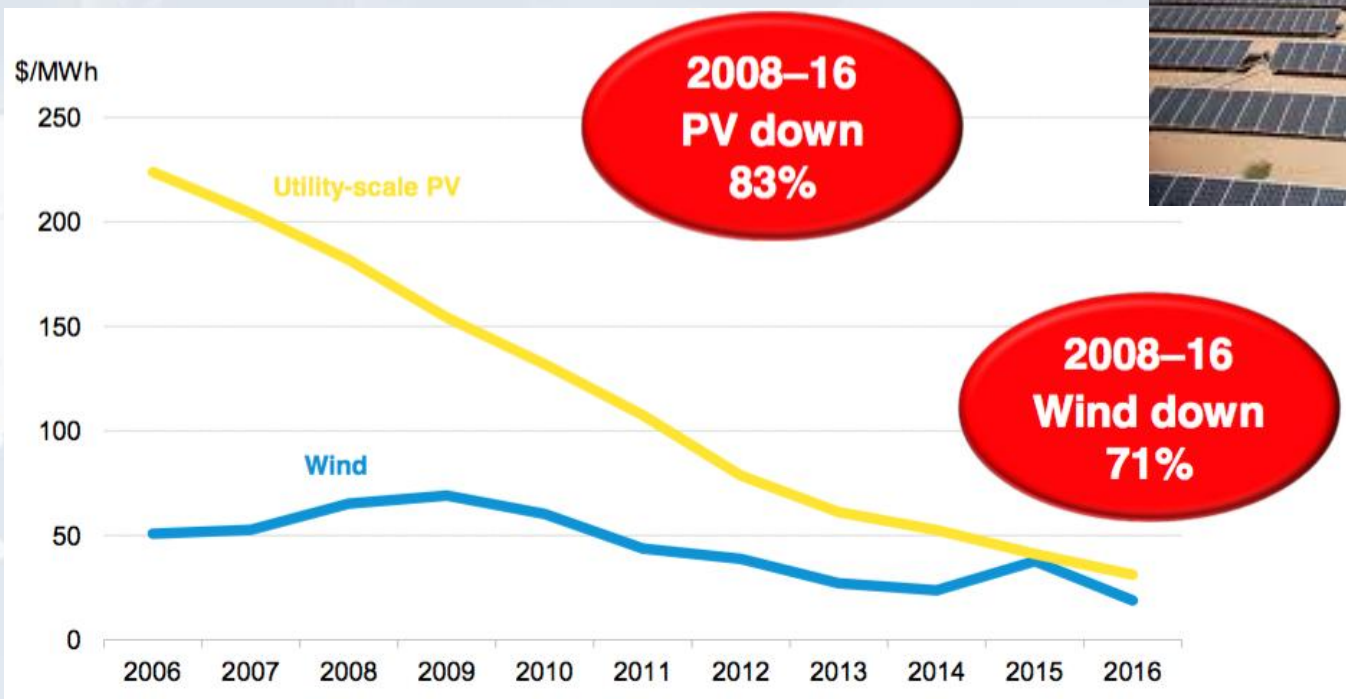
- March 2017, Dubai:
USD 2.42 c/kWh

- October 2017,
Saudi Arabia:
USD 1.79 c/kWh (!!)



The downward trend is global

Average US renewable energy PPA prices



Unsubsidized wind

- USD \$0.03/kWh wind power auction in Morocco (Jan 2016)
- “Market price”-only bid for offshore wind in the North Sea <http://gwec.net/the-risks-of-zero-subsidy-offshore-wind/>
- Etc. Etc.



How are such low bids possible?

- Decreased technology costs →
- Increased (and increasingly global) competition
- Economies of scale (1.17GW project in Dubai!)
- Land is often pre-packaged/free
- Prices often exclude grid connection costs
- Low global interest rates →
- State-backed financing (e.g. Enel, Masdar)
- Gov't off-taker guarantees

Historical and Forecasted Utility PV System Pricing, 2013-2022E

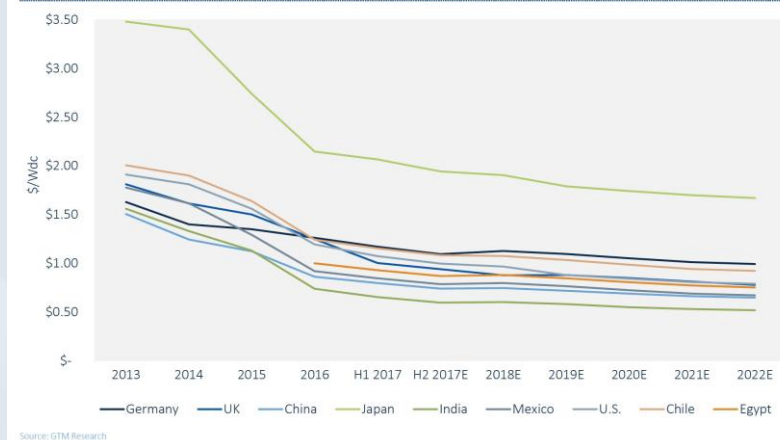
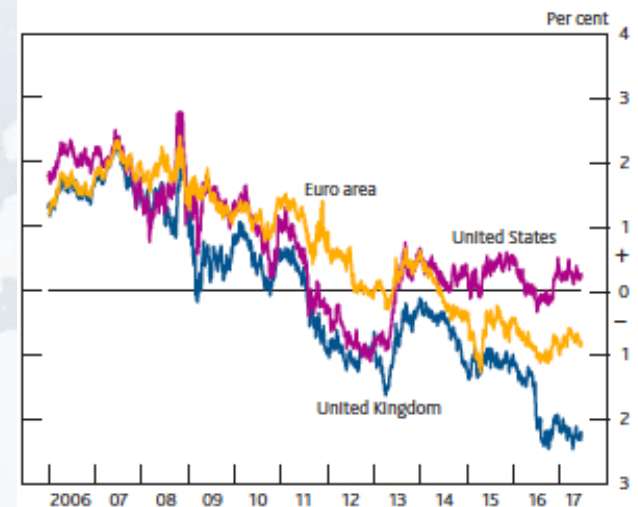


Chart D Advanced-economy risk-free real interest rates remain close to historically low levels
International ten-year real government bond yields^(a)

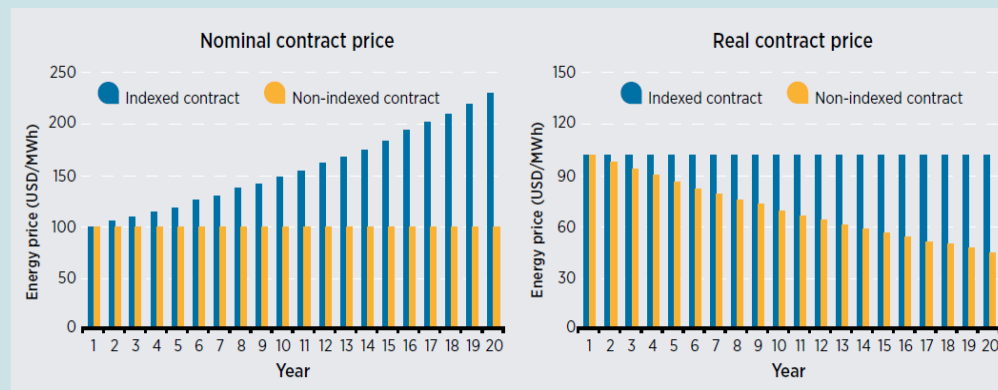


Sources: Bloomberg and Bank calculations.

How are such low bids possible? (con't)

- Cheap labor
- Inflation adjustment is often not disclosed →
- “Loss leader” projects simply to gain a foothold
- Long contracts (e.g. 25 yrs)
- One-upmanship →
- And finally, actual costs might be higher due to unpublished terms in the contract (off-peak vs. on-peak pricing, etc.) or due to future re-negotiation

Figure 5 The effect of inflation indexing on contract price



Note: the figure aims to show the remuneration of indexed/non-indexed contracts under nominal and real terms. A contract price of USD 100/MWh and 4% inflation were used in this example, for illustrative purposes.



Irrational exuberance?



“(Bids) are becoming increasingly divorced from the reality of payments.”

- Jenny Chase, BNEF
<https://www.bloomberg.com/news/articles/2017-10-03/saudi-arabia-gets-cheapest-ever-bids-for-solar-power-in-auction>

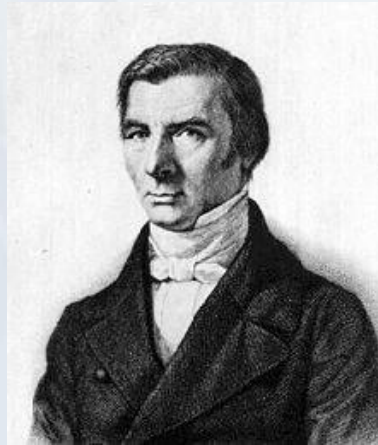
Concluding Remarks

- Ultimately, bids have to pencil out: i.e. cash flows have to cover costs
- In the months and years ahead, it will become clear whether these low bids can sustain financial scrutiny
- We are clearly in uncharted waters

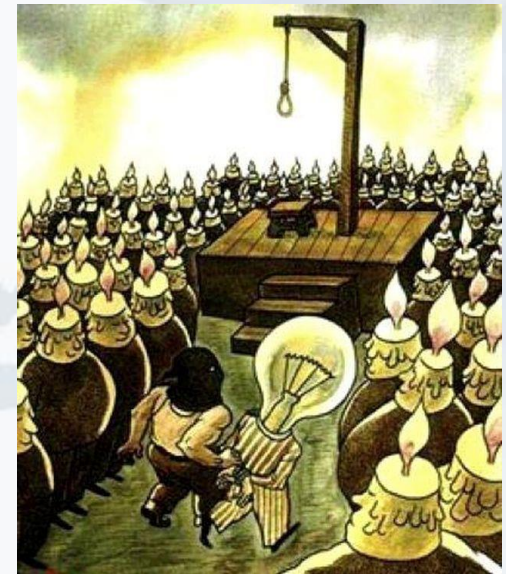


Concluding Remarks

Frederic Bastiat

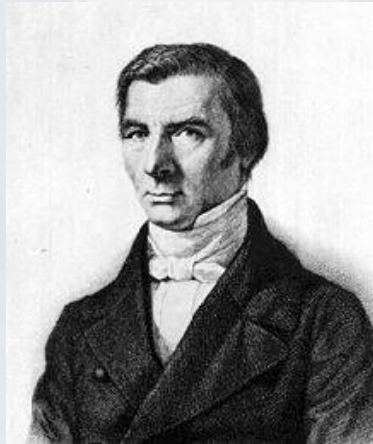


“We are suffering from the ruinous competition of a rival who apparently works under conditions so far superior to our own for the production of light that he is flooding the domestic market with it at an incredibly low price; for the moment he appears in the morning, our sales cease, all the consumers turn to him, and a branch of our industry whose ramifications are innumerable is all at once reduced to complete stagnation. This rival... is none other than the Sun.”

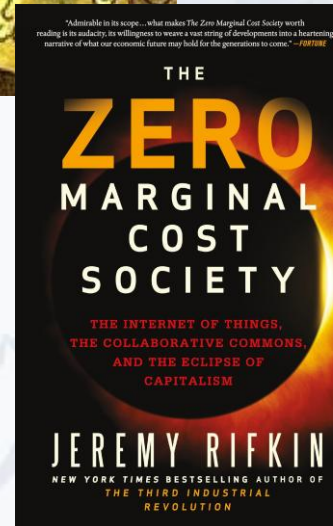
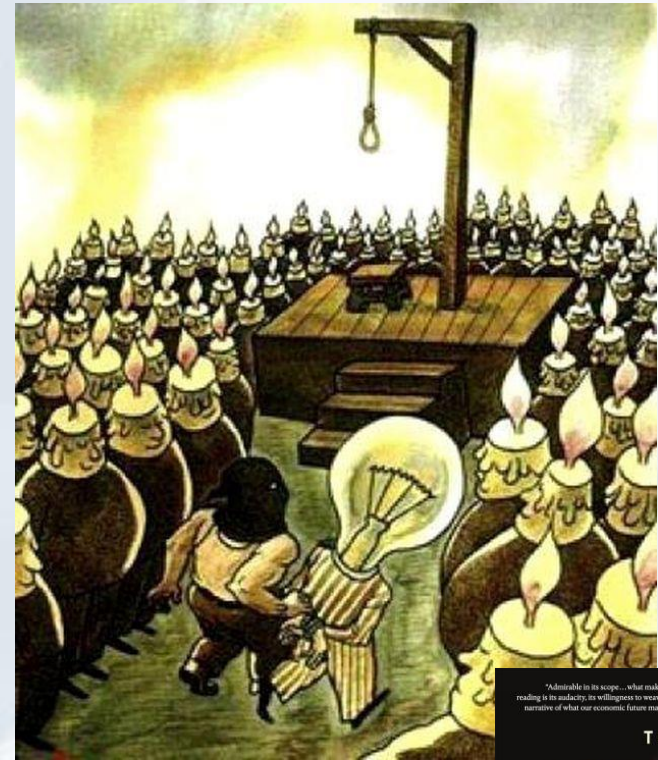


Concluding Remarks

Frederic Bastiat



"We ask you to be so good as to pass a law requiring the closing of all windows, dormers, skylights, inside and outside shutters, curtains, casements, bull's-eyes, deadlights, and blinds — in short, all openings, holes, chinks, and fissures through which the light of the sun is wont to enter houses. Make your choice, but be logical... how inconsistent it would be to admit the light of the Sun, whose price is zero all day long!"



Thank you!

Questions?

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