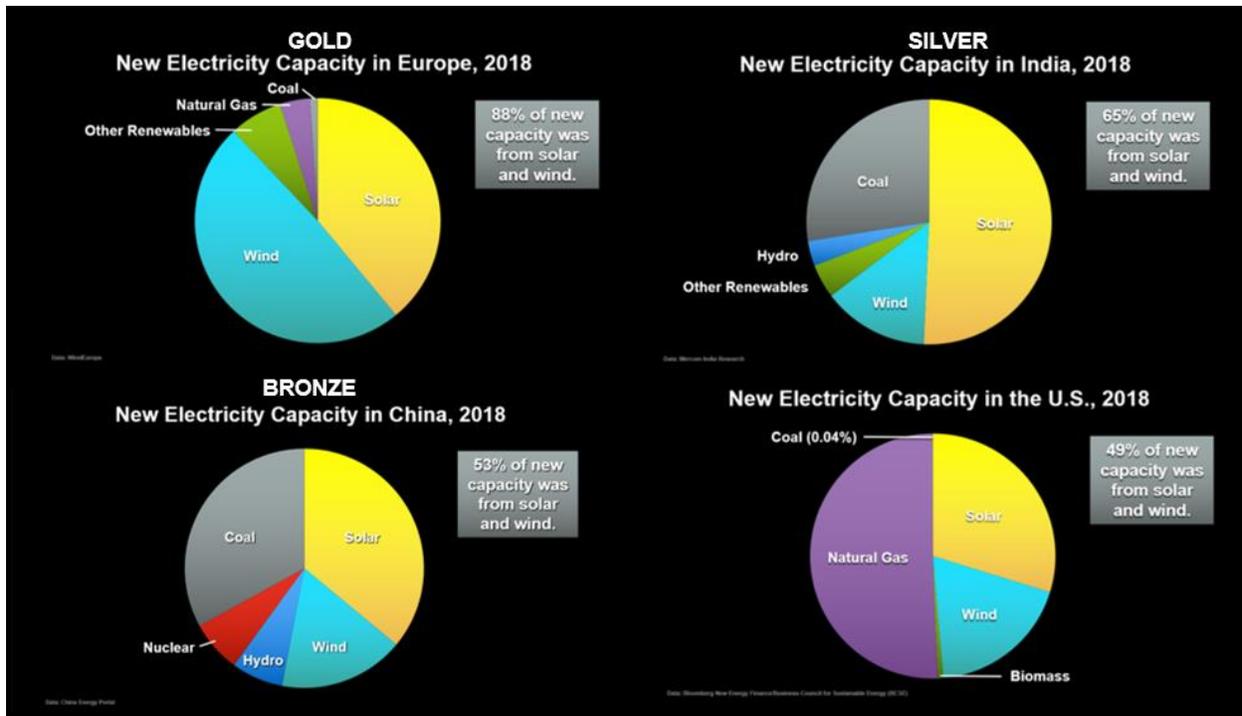


Less renewables in US, even though they are CHEAPER now!

-levelizing the playing field for renewables, because it is not

Bronze for China (53% CHEAP renewables, out of all NEW energy built in 2018), Silver for India (65% CHEAP renewables), Gold for Europe (88% CHEAP renewables). The US comes in only 4th (49% CHEAP renewables). Even though they are CHEAPER now, there appears to be an issue in the US.



Why?

Because **playing fields are not levelized**.

Renewables are competing with natural gas for market access (50% installations in 2018 vs 49% CHEAPER renewables). And, even though renewables are CHEAPER, they are often not winning yet. There are 2 main reasons for it:

1. Road to market

Firstly, the 'road to market' is often blocked for renewables, and, open for natural gas! It is easy to supply gas plants through a **new pipeline** that can be permitted under **federal jurisdiction** (Federal Energy Regulatory Commission, FERC). It takes a few years only, perhaps **3 years**, and yet another pipeline is built.

For **wind & solar** however, the road to market is a **new transmission line** which is not under federal, but under several States' jurisdiction. It therefore takes **10-20 years**, i.e. forever, to get large scale transmission built. *Renewables are simply **lacking the road to market***, that is being built for much more expensive natural gas plants so easily.

2. Wholesale market choices for all

Secondly, Congress could free up power markets, i.e. direct the overseeing federal agency **FERC** to order **wholesale market choices FOR ALL**, i.e. throughout the country, and not just in half the country (the unregulated markets). With such wholesale market choices FOR ALL, each company could **choose** to buy cleaner AND CHEAPER renewable power. And they will!

How great is this?

And, quickly, you would not talk about another 1,000 MW in Georgia (as an example) with lots of fortune 500 companies wanting to buy clean AND CHEAP, but rather another 10,000 MW to satisfy industrial & customer demand for clean AND CHEAP renewables! This is a currently stranded investment of about \$10 billion for Georgia. Similar for many other States without whole sale market choices (mostly regulated markets).

A compromise – Open access & Choices for all

If Congress cannot agree on federal jurisdiction for transmission lines, a compromise could be to direct FERC at the very least to open up existing powerline **right of ways (ROW)** for **OPEN ACCESS** to repower them. i.e. the right for all market participants to use and rebuild existing ROWs *through a FERC controlled permitting process*. This would possibly **fix the system** and lead to much greater installations of CHEAPER renewables in **half** the Country.

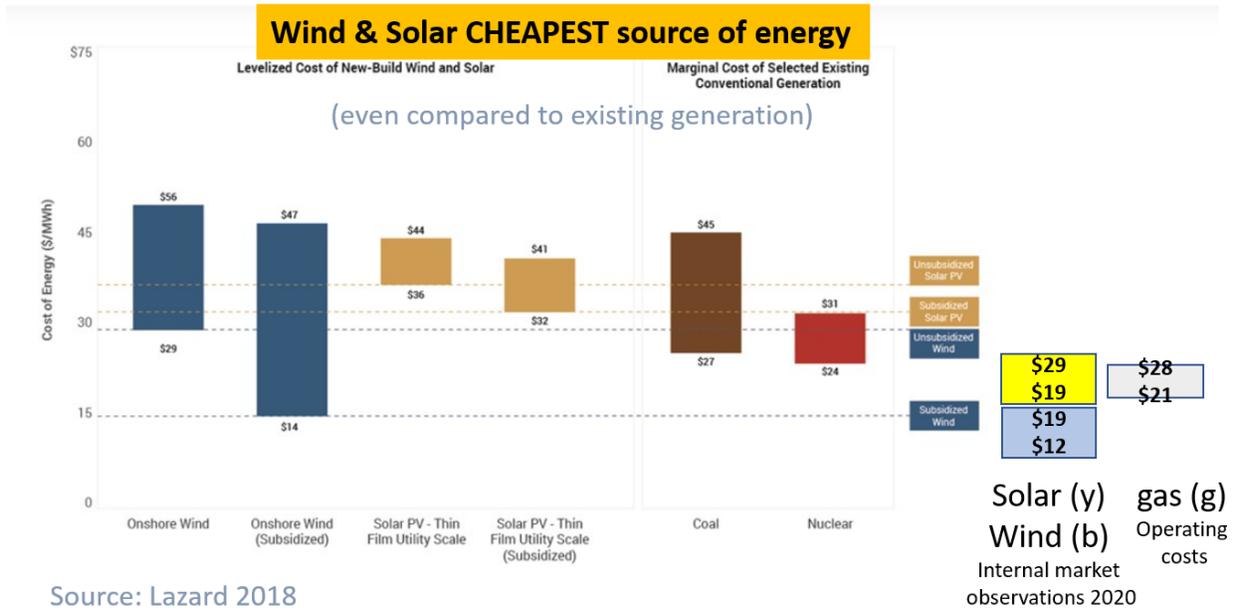
And, if you combine it with **wholesale market choices FOR ALL**, this double fix would lead to much greater installations of CHEAPER renewables in **all** the Country! We are talking about hundreds of billions of dollars of currently stranded investments into CHEAPER renewables that can save customers hundreds of billions as well!

Summary

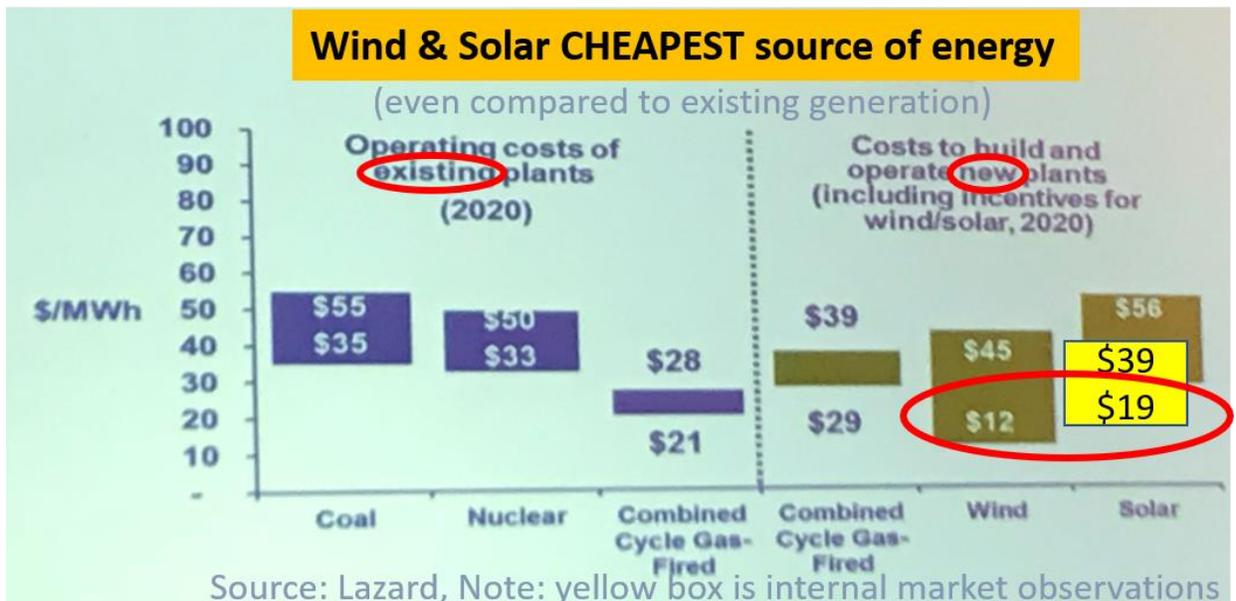
LEVELIZE the playing field for CHEAP renewables (ROAD to market & wholesale MARKET CHOICES), and CHEAP will happen faster.

References:

How much CHEAPER are renewables? Much CHEAPER - here is the data:



Source: Lazard 2018



Source: Lazard, Note: yellow box is internal market observations

Levelized Cost of Energy Comparison—Unsubsidized Analysis

Certain Alternative Energy generation technologies are cost-competitive with conventional generation technologies under certain circumstances⁽¹⁾

