Forbes

Will The U.S. Coal Decline Continue?

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What's Trump's new coal proposal?

Adding to its controversial plan to leverage federal authority to keep retiring baseload coal (and nuclear) plants online, the Trump administration now has another proposal to help these energy sources on the grounds of national security: use U.S. West Coast military installations for exporting coal (and LNG).

The West poses a particular challenge for the administration's coal goals because the states there have stringent environmental rules and opposition to coal that means serious pushback against anything "pro-coal." This explains why the goal to export Powder River Basin (PRB) coal in Wyoming via Washington state to fast growing markets in Asia has struggled to take flight.

U.S. Interior Secretary Ryan Zinke says that he does "respect the state of Washington and Oregon and California, but also, it's in our interest for national security and our allies to make sure that they have access to affordable energy commodities." With our exports to coal-based Asia rising quickly, the ability to export even more, especially from areas closer to the PRB, is a really big deal for the U.S. coal industry. The PRB is low-cost, supplies 40% of U.S. coal, and exports are seen as its primary growth market.

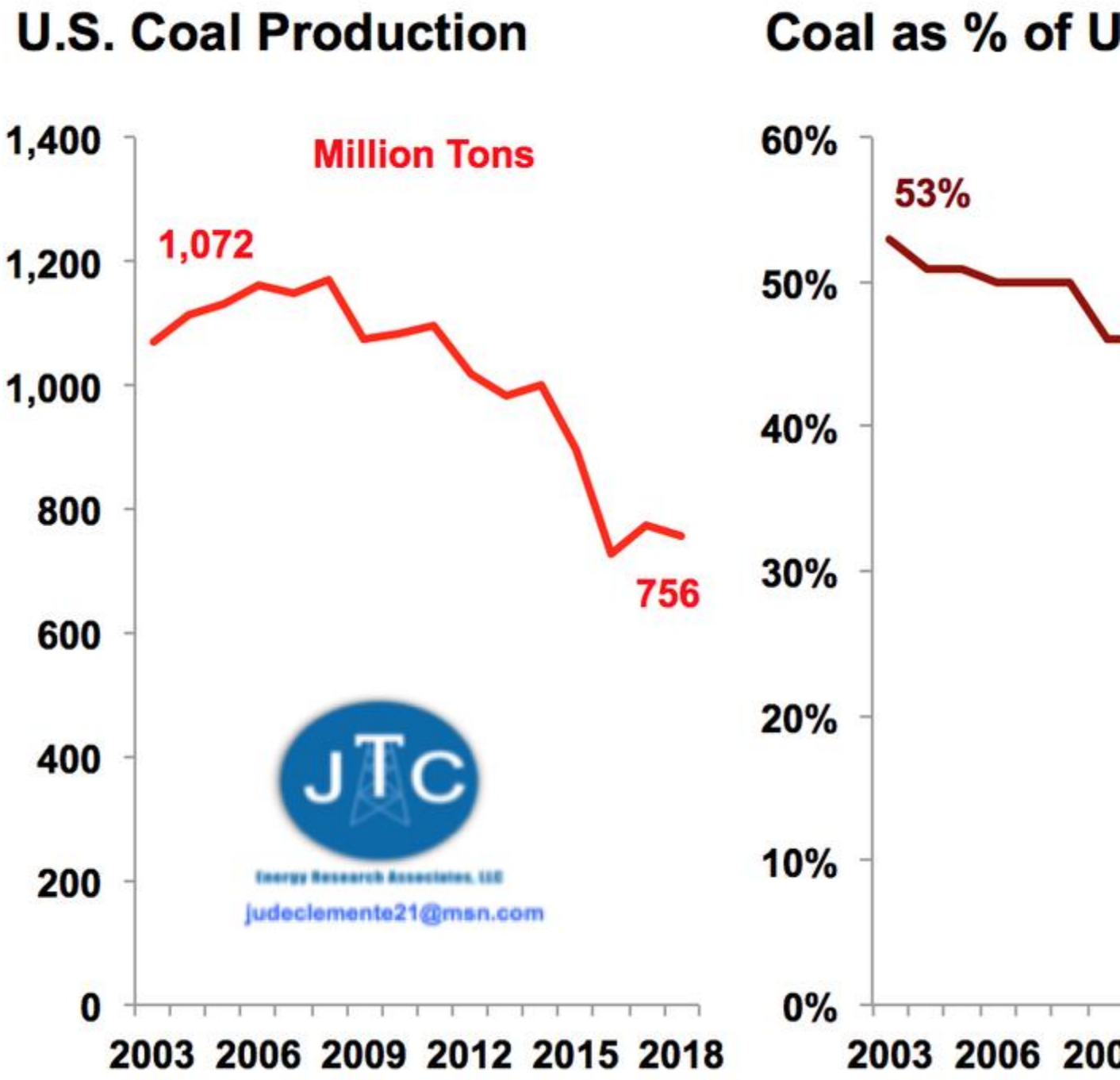
How much has coal really declined in the U.S.?

First, it's crucial to remember that coal was the cornerstone of the U.S. electric power system from its inception with Thomas Edison's coal-based Pearl Street Station in 1882 all the way until 2016, when it was surpassed by natural gas. A 134-year reign of coal power. About 95% of all U.S. coal demand is for generating electricity, the most advanced method of using coal. Electricity in China, for instance, accounts for just 60% of its coal demand: "China's "Climate Plan" Centers on More Coal Electricity."

It's been a tough decade for U.S. coal though. Coal generation capacity was 260,000 MW at the end of 2017, a 16% fall from 2011 alone, with another 16,000 MW expected to be retired by

2021. There's no question that low-cost natural gas, along with rising renewables, has helped push more coal out of the market. But it's just as undeniably true that so has overbearing regulations, such as the Mercury and Air Toxics Standards (MATS) that bulled their way into the market under the anti-coal Obama administration.

Contrary to what the anti-coal business wants you to believe, experts at the University of Texas' Bureau of Economic Geology cite the reality: "MATS appears to be the key driver of retirements." Ditto for experts from The Brattle Group, which call MATS the "single-most important environmental regulation driving the expected coal plant retirements in the U.S."



The fall of U.S. coal production and power has been swift.Data source: EIA; JTC

Does U.S. coal use have a future?

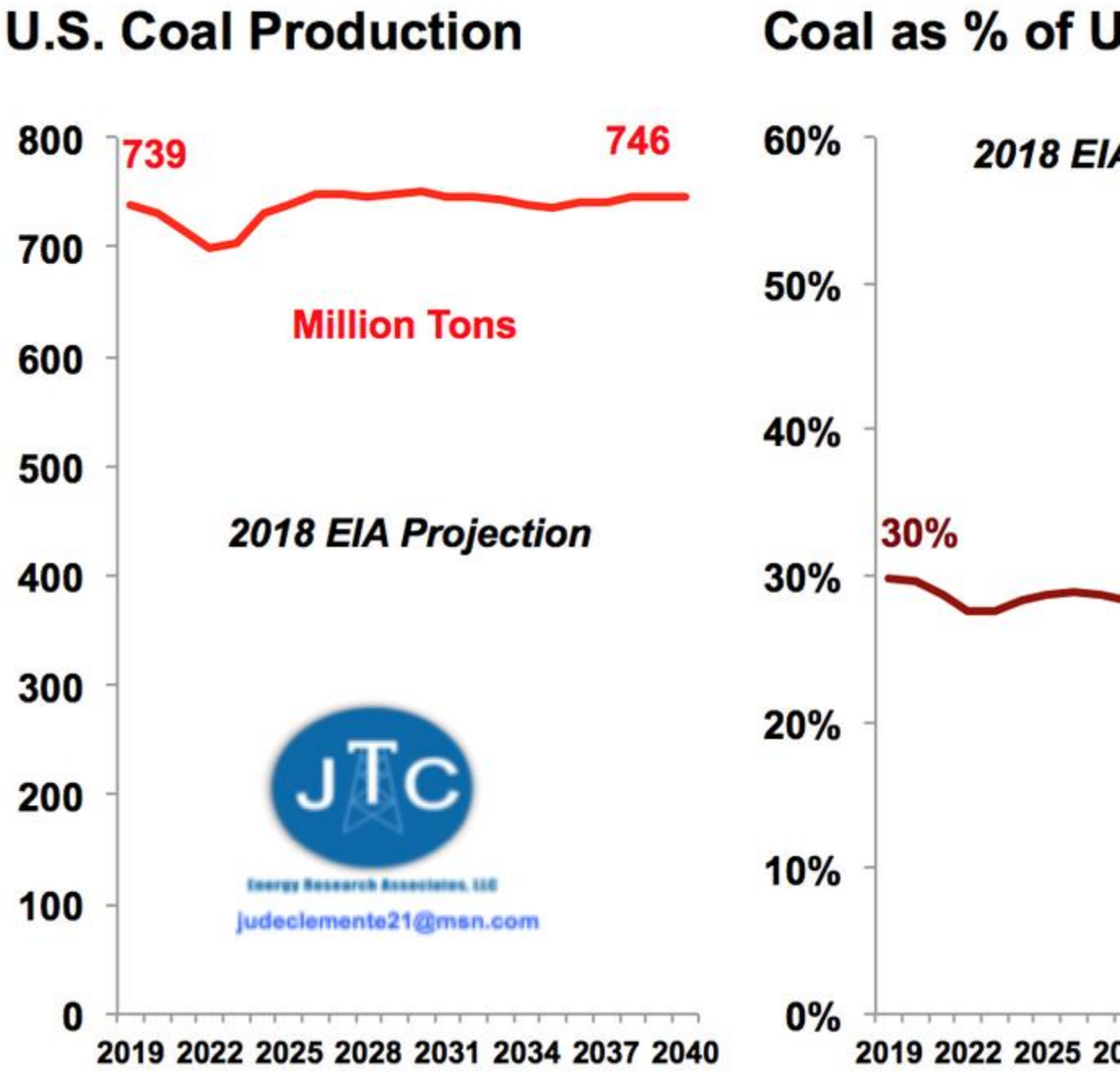
While exports should remain the largest growth market for U.S. coal, domestic usage isn't nearly as "dead" as some like to claim. The reality of course is that there are numerous factors that

could not just keep the world's most vital source of electricity alive in the U.S. power market but maintain its current 2nd place slot (behind gas). Just a few of them:

- higher-than-expected natural gas prices
- surging domestic power needs from electric cars (can increase home power needs by 50% or more) and other shifts to electrification
- manufacturing renaissance that requires affordable power
- erosion of "sweet spots" for wind and solar that make new builds increasingly more difficult
- fading subsidies for wind and solar
- critical "turning point" within three years where the wind industry "begins to spend more on operations and maintenance than it spends on installing new wind turbines"
- continuation of a "battery storage revolution" that simply hasn't materialized in over 200 years

Routinely unmentioned of course, the non-stop evolution of advancing technologies offers another boost for coal. Ultra-supercritical coal plants and the very carbon capture and storage systems that the International Energy Agency has continually deemed our most essential weapon in the fight against climate change are sure to keep coal "fully in the game" by drastically slashing the CO2 emissions of coal combustion.

Peering far into the future, EIA's *Annual Energy Outlook 2018* models a stabilization for U.S. coal, a great balancing act in the face of adversity that the industry would be quite comfortable with.



The future of coal is one of pretty solid stabilization, per EIA modeling.Data source: EIA; JTC