Twitter Thread by Balaji Vaidyanath ■■

Balaji Vaidyanath ■■
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A humble prediction. Seeds are being sown around the world for a comeback of nuclear energy. In the next decade, we can see government's around the world approving more nuclear reactors as they realize they aren't going anywhere near net carbon zero with wind and solar. ■

Take Australia for example. It is home to 1/3rd of the world's uranium - the chemical element needed to produce nuclear energy in reactors but doesn't have a single nuclear reactor to generate electricity.

https://t.co/UbssY7sIeE

Which is fine as long as you have other sources of energy that are cheap, plentiful and reliable. But South Australia's energy prices are arguably the highest in the world.

https://t.co/1MAQBQ3Fto

The European Commission released a very important report this April. In its assessment, it concluded that nuclear energy had near to zero greenhouse gas emissions in energy generation phase and can be a contributor to climate mitigation objectives.

https://t.co/ZZOVZCtplh

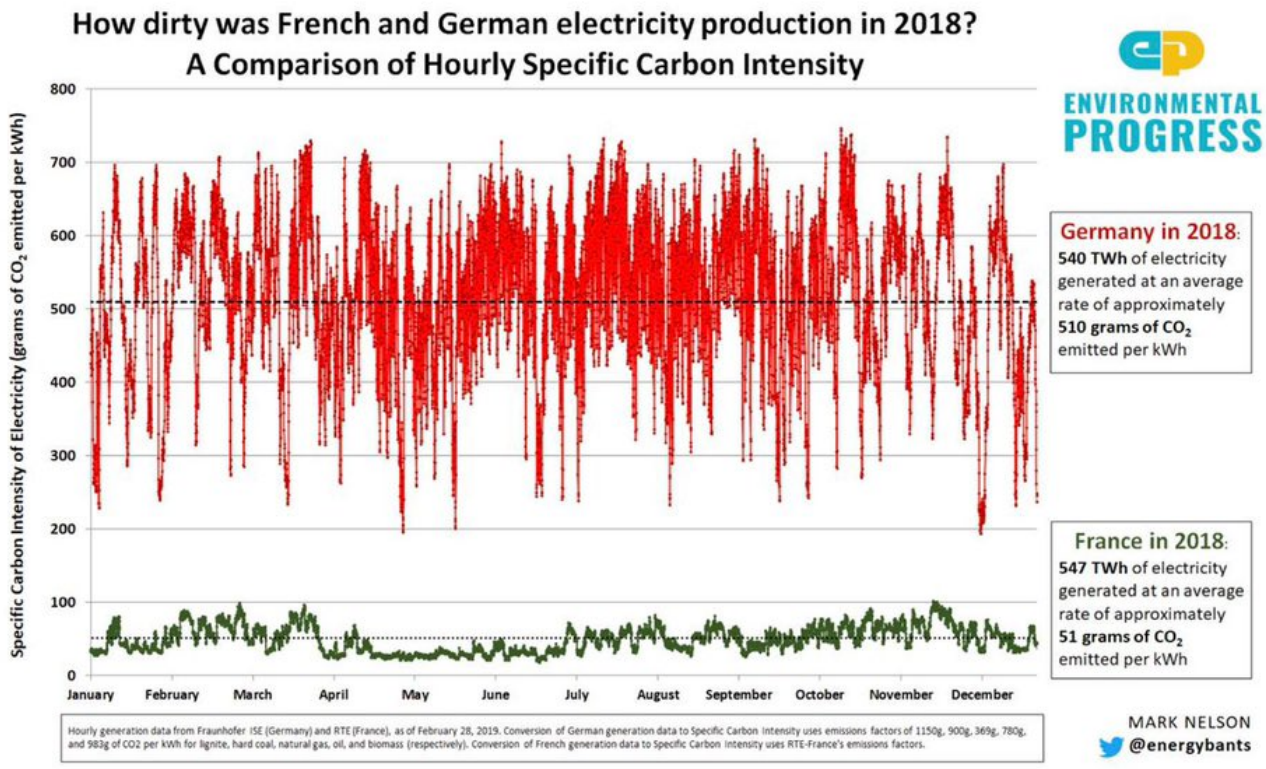
What about radioactive waste management? France which produces 75% of its energy requirements from nuclear is a great example.

'By way of comparison, annual per capita radioactive waste generated in France is now 1 kg (of which 11 grams high-level waste), compared with 2,500 kg of industrial waste (of which 100 kg of toxic waste).'

https://t.co/DgCQxEkehf

Germany took a polar opposite view of France post Fukushima Daiichi in 2011 by reducing nuclear to just 11% of its total electricity now. Germany spent close to $600 bn in renewables over the last 10 years. Renewables now account for 35% of total electricity production in Ger

This should have reduced carbon emissions right? Unfortunately sun doesn't shine in the night and wind doesn't blow always. So they have to rely more on fossil fuels than France. Germany's carbon emission is 10x France and its electricity prices are 2x France. No kidding! ■



To not be dependent on Russia's natural gas, Germany is destroying Hambach forest for coal (https://t.co/G7A0E2aVFV) and setting up wind turbines in Reinhardswald forest. Wind turbines across the world are known for killing eagles, hawks, bats and other migratory birds.

https://t.co/n2zS5RPT7k

New York last year closed it's best and one and only nuclear power plant called Indian Point largely due to political reasons. This year, many New Yorkers suffered black outs last week due to grid strain following the heat wave. https://t.co/obLlF8dFGu

> \u2018In 2019, despite decades of subsidies, all of the state\u2019s wind and solar facilities generated just five terawatt-hours of power, less than one-third the output of Indian Point and less than 4 percent of the total energy generated in the state.\u2019https://t.co/DBUNxmjg1n
>
> — Balaji Vaidyanath \u26a1\ufe0f (@nbalajiv) July 1, 2021

What about land requirements? New York's Indian Point gives a perspective on land requirement. Indian Point covers 239 acres. One can fit 3 Indian Point's inside New York City's Central Park.

To produce the same amount of power using wind, you need a land area equivalent to 400 Central Park filled with wind turbines. (This long read is a must).

https://t.co/FWHKWFE81w

What about the harmful effects of exposure to radiation? Prof. Gerald Thomas from Imperial College of London busts many myths and half truths. She's covered Fukushima and Chernobyl extensively

https://t.co/15Ywwdmnk4 (Her presentation)

https://t.co/4VEJfIqLts (her credentials)

This 20 minute super interesting documentary covers Australian energy expert Dr Ben Heard who's fighting for nuclear in Australia and Greenpeace Oz's view on Fukushima. (P.S: Not a single death in Fukushima due to radiation exposure)

https://t.co/sYZQoW6mDn

Life expectancy in France with 75% nuclear contribution to total energy.

Vi India 20:13 47%

google.com

Google

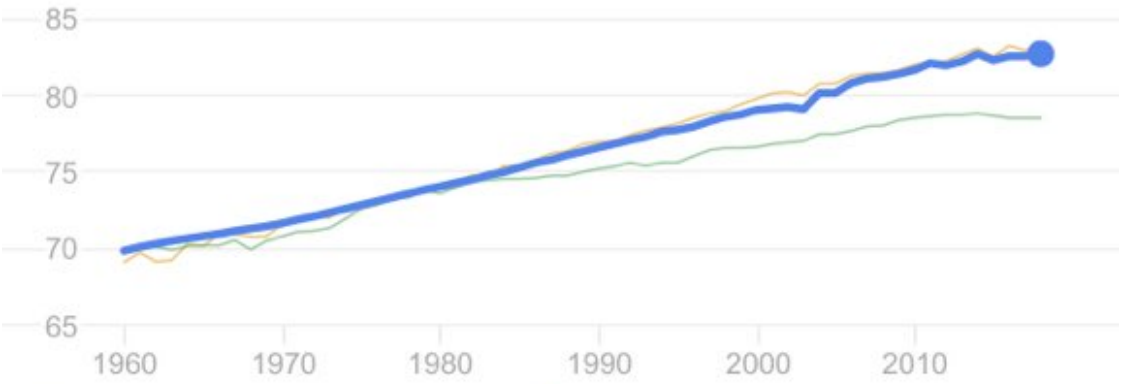
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France / Life expectancy

82.72 years (2018)



United States
78.54 years (2018)

Italy
83.35 years (2018)

Explore more

Sources include: World Bank

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A 3 minute video by Prof Thomas explaining how we are constantly exposed to radiation (nuclear or not)

https://t.co/tvYqVQ23Kb

What about India? Though we have 22+ reactors, nuclear is a distant fifth after coal, gas, hydro and wind. We generate about 8000 MW from nuclear which is just 3% of total.

Jairam Ramesh (yes no typo there) believes nuclear should at least be 10% of total energy for meaningful reduction in carbon emissions.

https://t.co/TqHa6CpooV

As per https://t.co/6APTU5gDgA 5 more sites have been given in principle approval for more reactors.

Maharashtra - 6*1650 - France
AP - 6*1208 - USA
Gujarat - 6*1000 - USA
West Bengal - 6*1000 - Russia
MP - 4*700 - Indigenous

World has flirted enough with solar and wind for more than two decades now. We have enough photo ops to prove ‘greenness’ along with enough data to prove that it’s best complementary and can never be core.

India needs to prioritize nuclear over and above (snake oil) solar, wind and ushers in energy independence by providing safe, cheap, reliable and plentiful electricity with low emissions being the cherry on top. END.