

Here are this week's charts on Nuclear Energy:

Welcome to "Charting with Karim" - a bi-weekly document that showcases a collection of interesting and informative charts. In this bi-weekly report, I aim to provide readers with a collection of charts on the markets and the economy that I hope you will find engaging and informative. Whether you are a seasoned investor, a market enthusiast, or simply interested in staying up to date with the latest data and trends, "Charting with Karim" has something for everyone. So, sit back, relax, and join us on a journey through the week's charts on Nuclear Energy. I welcome any suggestions or feedback you have.

NUCLEAR ENERGY - Is it the future?

ONE:

Change is happening in the field of nuclear energy. After decades of underinvestment, the nuclear energy industry is growing exponentially.

Globally, sixty new reactors are being built with one hundred more planned – and China is leading the charge (see the chart below).

Top 10 Countries by Nuclear Capacity Under Construction Reactor Capacity A = Reactor Under Construction China ΔΔΔΔΔ India China is building 21 new reactors including the world's first commercial small modular reactor (SMR). Turkey South Korea UK Despite building one fewer reactor, the UK has more under-construction capacity than Russia because its reactors can generate more electricity. Russia UAE When the two under-construction reactors are operable, the UAE's Barakah Nuclear Power Plant will supply 25% of the country's electricity. Japan* U.S. The two U.S. reactors under construction in Georgia are expected to come online before 2023. Bangladesh 0 2.5k 5k 7.5k 10k 12.5k 17.5k 20k Total under construction reactor gross capacity (MWe)

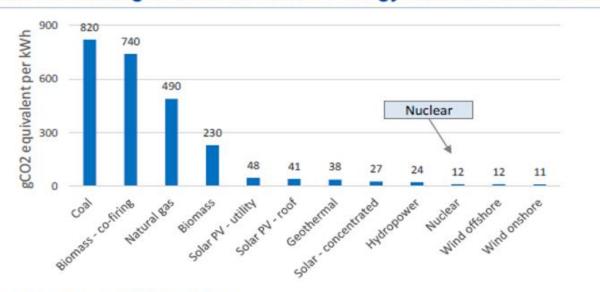
Source: World Nuclear Association

TWO:

Nuclear energy's rebirth is thanks in part to advancements in technology, significantly improving safety and minimizing waste. Another reason for this renewed growth? The increased demand for clean energy.

With the global pressure to decarbonize, nuclear energy is set to be one several solutions (others include solar, wind, geothermal and hydro). As the chart below shows, indirect emissions associated with nuclear plant construction and disposal compares well with these other sources. It also ranks among the lowest emitters of gCO2 among energy sources.

Nuclear among lowest emissions energy sources available...

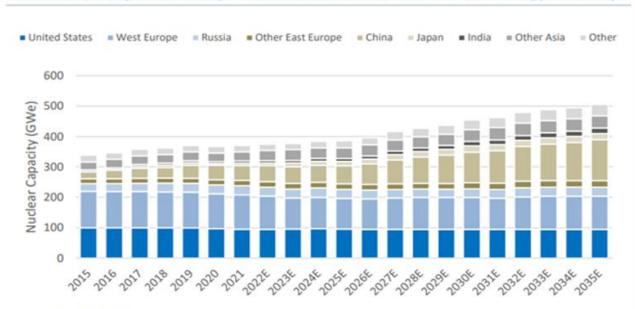


Source: IEA, RBC Capital Markets estimates

THREE:

Furthermore, there has been a shift in attitude thanks to the recent wars in energy-sensitive areas, with policy makers considering nuclear sources to achieve energy security and independence. The graph below shows that, so far, most of the global capacity growth has been within Eastern Europe and Asia.

Global capacity increasing as countries turn to nuclear for energy security

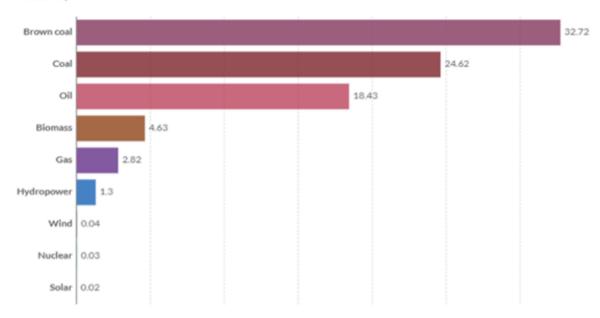


Source: UxC, WNA, RBC Capital Markets estimates

FOUR:

Past nuclear plant accidents, such as Three Mile Island (U.S., 1979), Chernobyl (Ukraine, 1986) and Fukushima (Japan, 2011), as well as the creation and use of nuclear weapons, have created a negative impression in public mindset towards nuclear energy. However, evidence shows that this is changing. In fact, death rates from nuclear accidents and air pollution are much lower than many other sources of energy (see below).

Death rates are measured based on deaths from accidents and air pollution per terawatt-hour (TWh) of electricity.



Source: University of Oxford, Global Change Data Lab, Our World In Data

Thank you,

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