Hot or Not? Investing in Nuclear

The Best Investment for the 21st Century

By Jeremiah Josey

[About The Thorium Network]

[About Jeremiah Emanuel Josey]

Nuclear Power:
The Best Long Term Investment Strategy for Generational Wealth

the thorium network

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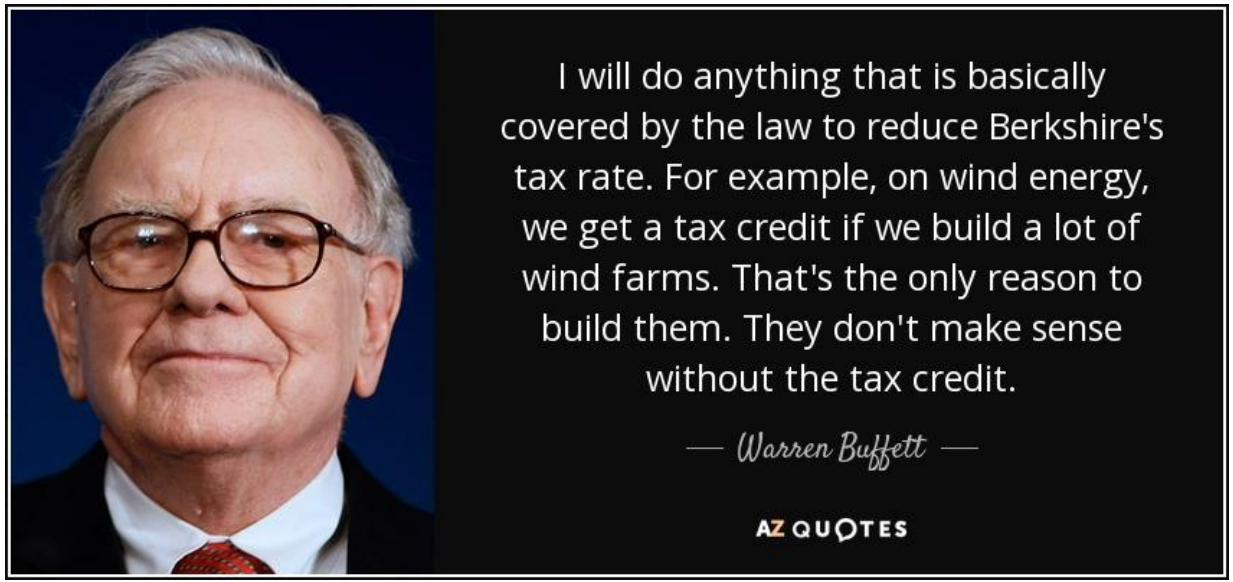
About Jeremiah Emanuel Josey

Agenda:

01	Introduction
02	Current Market Trends
03	Falsehoods of Radiation
04	Organised Opposition
05	Lowering Building Costs
06	Lessening Building Times
07	Technology Trends
08	Future Outlook

The Work of Dr. Simon Michaux shows two things: Driving to Zero Carbon with Renewables Doesn't Work & Renewables are a "great investment"



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[No Return on Capital with Wind Power - Warren Buffet] | [About Jeremiah Emanuel Josey]

The Outcome from Dr. Simon Michaux's work is that Fission Energy Can Save Us and Nuclear is a *Better* Investment

My Name is Jeremiah Emanuel Josey

Raised in broadacre and livestock farming in outback Australia

Engineer training

Self taught in business, finance

Business owner, investor and entrepreneur since 2000

1994 - 23 yrs - Consultants said 20 million. Me: 250k

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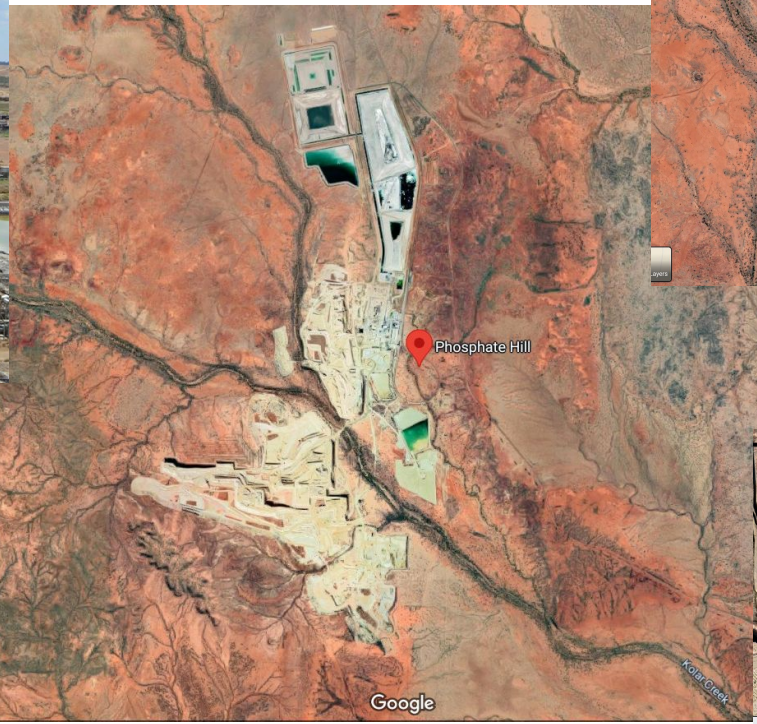
[BP Bulwer Island] | [About Jeremiah Emanuel Josey]

1998 (27 yrs) 1 Billion, 6 months early



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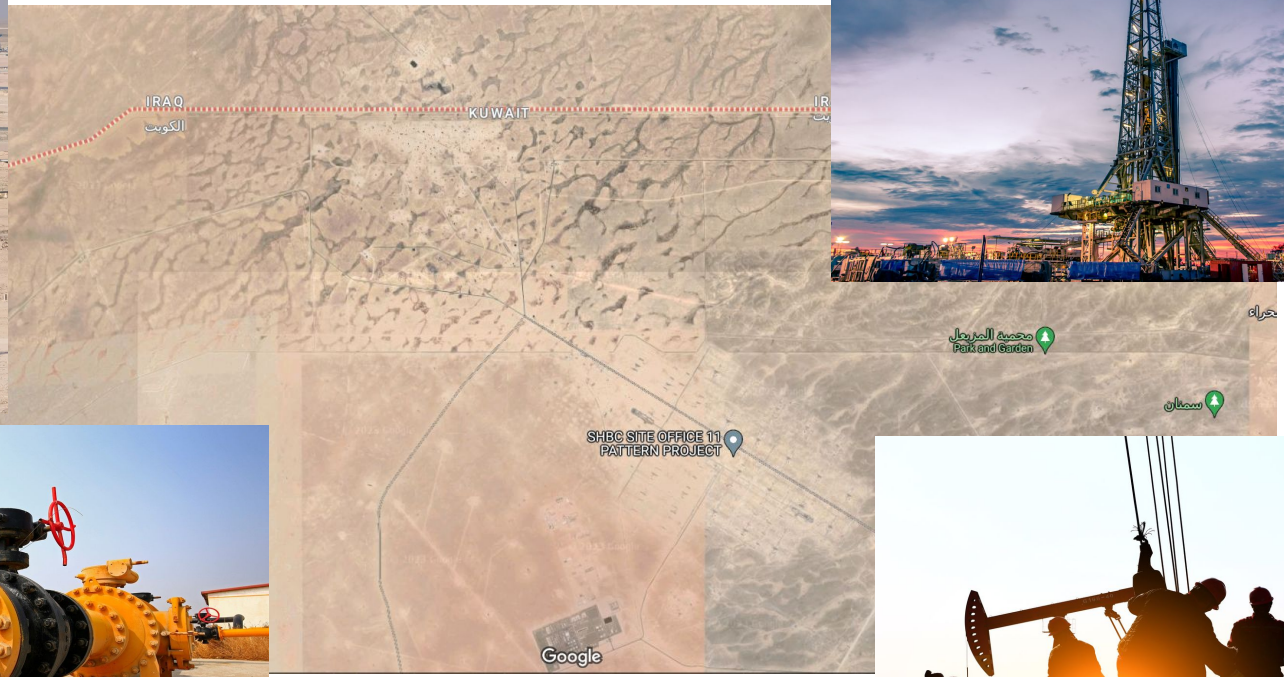
2010 (39 yrs) USD 15 billion boondoggle



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[Ratqa Heavy Oil] | [About Jeremiah Emanuel Josey]

2016, 45 yrs, Known Your Opponents

Swiss MECI Group Signs Deal in Iran for $839 Million Wind Farm

- Renewables would enable nation to export more oil and gas
- Chairman seeking to install 1 gigawatt of wind and solar

Bloomberg

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[Bloomberg Article] | [United Against Nuclear Iran] | [About Jeremiah Emanuel Josey]

2017 Metsamor, Armenia, Spent Nuclear Fuel

Launching The Thorium Network

Full Time into Fission Energy

Liquid Fission Thorium

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[Metsamor NPP] | [About Jeremiah Emanuel Josey]

Make A Difference - At Strategic Level

Nuclear Energy is the only viable future for our planet:

Liquid Fission Thorium

Advisor to the Kuwait Oil Company planning expenditure of 70 billion USD

Advising High Networth Family from 200m USD to USD 1B in 18 months

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Nuclear Fleet 440 Machines | 5% World's Energy | 30 EJ

Country	Machines	Total GW Capacity	% of Country Supply
United States	93	97.4	20%
France	56	61.4	70%
China	52	51.9	5%
Russia	38	38.4	20%
South Korea	24	23.3	27%
India	23	6.8	2%
Canada	19	13.5	15%

Major Fleet Owners

Fleet Owner	Number of Machines	Total GW Capacity	Country
EDF Group	56	61	France
China National Nuclear Corporation CNNC	42	37	China
Rosatom	38	38	Russia
Korea Electric Power Corporation KEPCO	24	23	South Korea
Exelon Corporation	22	19	USA
Duke Energy	11	11	USA
Southern Company	6	7	USA
NextEra Energy	5	4	USA
Dominion Energy	4	4	USA
Tennessee Valley Authority TVA	3	4	USA

Major Nuclear Sector Service Companies ~ 1 million people

Company	Category	Number of Employees	Country of HQ/Domicile
Rosatom State Atomic Energy Corporation	Nuclear Reactor Manufacturers and Operators	250000	Russia
EDF Group	Nuclear Power Plant Operators	160000	France
China National Nuclear Corporation (CNNC)	Nuclear Reactor Manufacturers and Operators	100000	China
Thermo Fisher Scientific	Radiation Protection and Safety	80000	United States
Bechtel Corporation	Nuclear Engineering and Consulting	55000	United States
Waste Management, Inc.	Nuclear Waste Management	45000	United States
Fluor Corporation	Nuclear Engineering and Consulting	44000	United States
China General Nuclear Power Group (CGN)	Nuclear Power Plant Operators	30000	China
China National Nuclear Power Co., Ltd. (CNNP)	Nuclear Power Plant Operators	20000	China
TVEL Fuel Company of Rosatom	Nuclear Fuel Suppliers	20000	Russia
Yokogawa Electric Corporation	Nuclear Instrumentation and Control	19000	Japan
Orano	Nuclear Decommissioning	16000	France
AREVA NP (now part of Framatome)	Nuclear Fuel Suppliers	14000	France
China National Nuclear Engineering Group (CNEC)	Nuclear Engineering and Consulting	10000	China
State Nuclear Power Technology Corporation (SNPTC)	Nuclear Engineering and Consulting	10000	China
Atomstroyexport (ASE Group)	Nuclear Engineering and Construction	10000	Russia
Westinghouse Electric Company	Nuclear Reactor Manufacturers	9000	United States
General Electric (GE) Hitachi Nuclear Energy	Nuclear Reactor Manufacturers	8000	United States
China Nuclear Industry Huaxing Construction Co., Ltd.	Nuclear Engineering and Construction	5000	China
China National Nuclear Fuel Co., Ltd. (CNNFC)	Nuclear Fuel Suppliers	2000	China

Nuclear Energy Index | MVNLRTR 90% Investable Universe

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Nuclear Energy Index | MVNLRTR 90% Investable Universe

Actual	Daily Change	Yearly
1,718.03	19.45 ▲ 1.15%	▲ 19.33%

The MVIS® Global Uranium & Nuclear Energy Index (MVNLR) tracks the performance of the largest and most liquid companies in the global uranium and nuclear energy industries. This is a modified market cap-weighted index, and only includes companies that generate at least 50% of their revenue from uranium and nuclear energy. MVNLR covers at least 90% of the investable universe.

VanEck Uranium+Nuclear Energy ETF | “NLR”

NAV ⓘ

$64.89 ▲

as of September 01, 2023

YTD RETURNS

18.11%

as of September 01, 2023

TOTAL NET ASSETS

$87.06M

as of September 01, 2023

GROSS EXPENSE RATIO ⓘ

0.67%

NET EXPENSE RATIO ⓘ

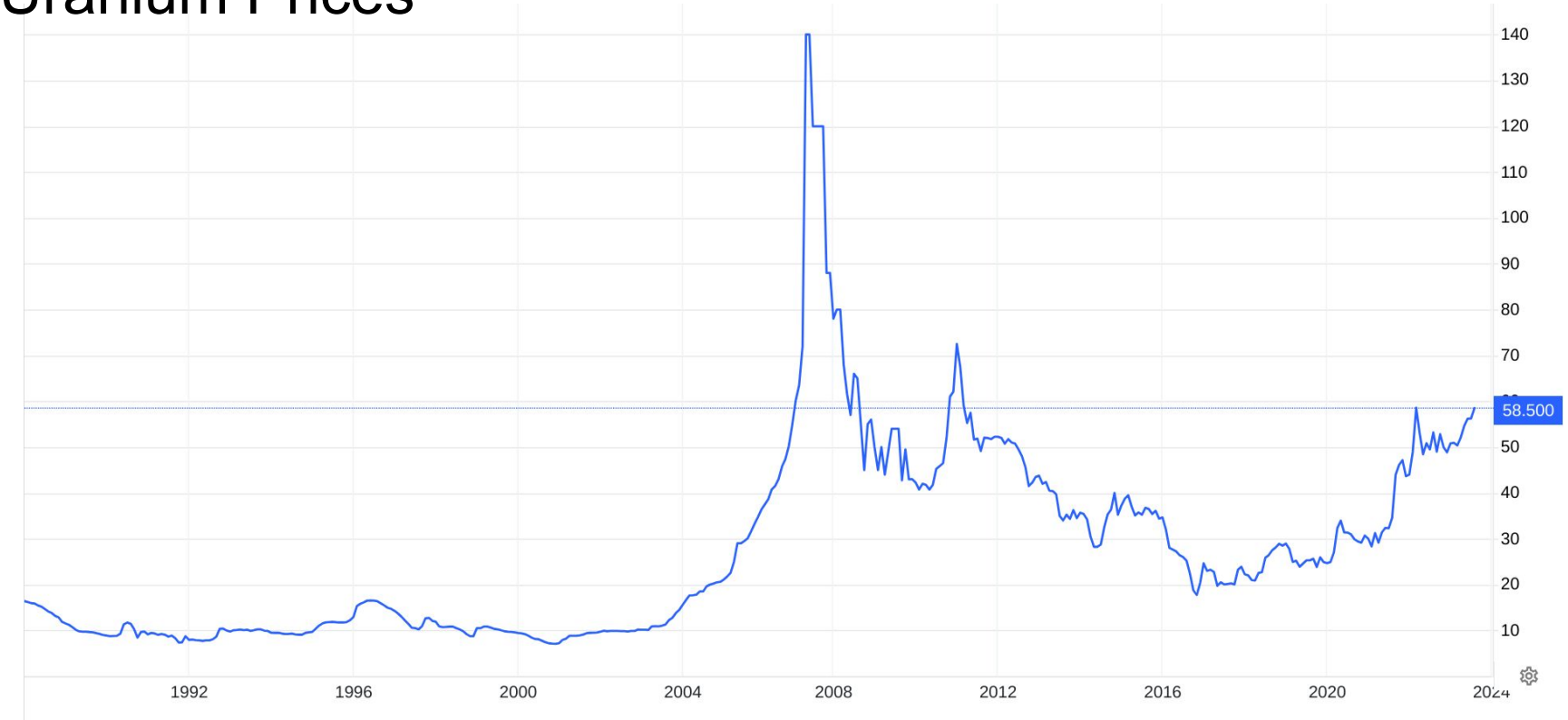
0.61%

INCEPTION DATE

08/13/2007

CONSTELLATION ENERGY CORP | PUBLIC SERVICE ENTERPRISE GROUP INC | CAMECO CORP | PG&E CORP | CEZ AS | FORTUM OYJ | ENDESA SA | NEXGEN ENERGY LTD | PALADIN ENERGY LTD | URANIUM ENERGY CORP

Uranium Prices



Here’s all the once-thru fuel ever used on the planet

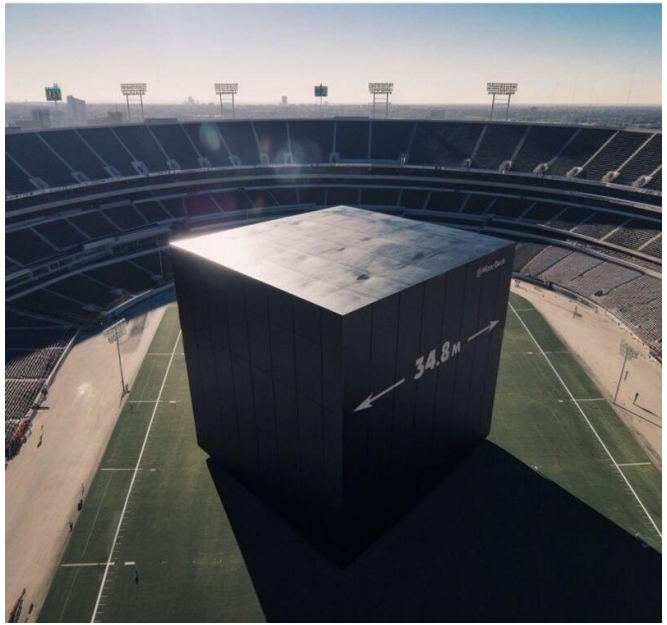
And it can all be used again. Indeed only the USA refused to reprocess.

35 meter cube

Can Be Used ~30 Times

25% Already Processed at Least Once

All the spent fuel ever discharged from nuclear power plants — about 460,000 tonnes worldwide since the start of nuclear electricity production in 1951 — could fit neatly in a football stadium.



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Radiation is Good For You

Evidence is from millions of examples it's good

Ramsar, Brazil, India

At around 250 mSiverts per year

(An airline pilot gets xxx pmSiverts per year)

President's Letter

60 Cited References

Advising to Increase Allowable Radiation Limits from fear based ICRP numbers to empirically derived numbers:

50 mSiverts per year.

c.f. Ramsar Iran, 250 mSiverts background

***SAFE** Fission Consult™*

Reference: TTN.2305.03

11 May 2023

His Excellency Dr. William Samoei Ruto, C.G.H
President of the Republic of Kenya
Office of the President, Harambee House
Harambee Avenue
00200 Nairobi KENYA
President.go.ke/administration/office-of-the-president

Via Facsimile: +254 20 313 613
Via Email: president@president.go.ke / feedback@president.go.ke
Via H.E. Ambassador Susan Wakiaga, Kenya Embassy in Switzerland info@kenyaembassy-bern.ch

Subjects:

Achieving Energy Sovereignty by managing nuclear energy sources with Science and not Propaganda.

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French Report: 690 Million Spent Against Fission 2022

Germany, through its political foundations, interferes in the political and economic affairs of its foreign partners, notably France. Since their inception, these organizations have proved to be agents of influence: in addition to their direct affiliation with German political parties, they are largely subservient to Berlin. Thanks to the soft power they deploy abroad, these foundations are useful in many ways: preparing the ground for more official cooperation, ideological propagation, shaping local socio-political elites, defending German economic interests.

US Report: USD 2.3 Billion Spent Against Fission 2022

There are more than 700 nonprofits and other advocacy groups in the United States that oppose the use of carbon free nuclear energy. An August 2023 analysis from the Capital Research Center examined fewer than 200 nonprofits that opposed nuclear energy and conservatively estimated that the total combined annual revenue of the American opponents of nuclear power exceeded USD2.3 billion.

The Myths to Keep You Out of Nuclear

1. High Cost - False.
2. Radiation is bad for you. It’s not, it’s good for you.
3. Waste - there is none.
4. Mining is bad - Fission fuels are a byproduct of existing mining activity

Trillions Invested into Renewables

Fossil Fuel 85% => 84%*

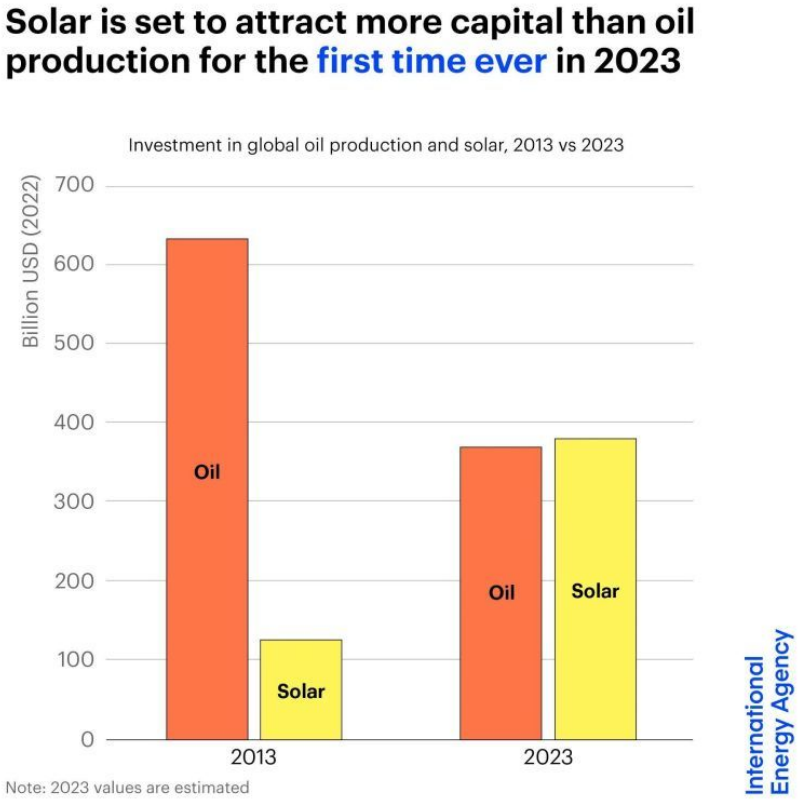
*IEA

Solar is good, but don't be the "last man standing"

Are you a Following Investor

or

A Foundational investor



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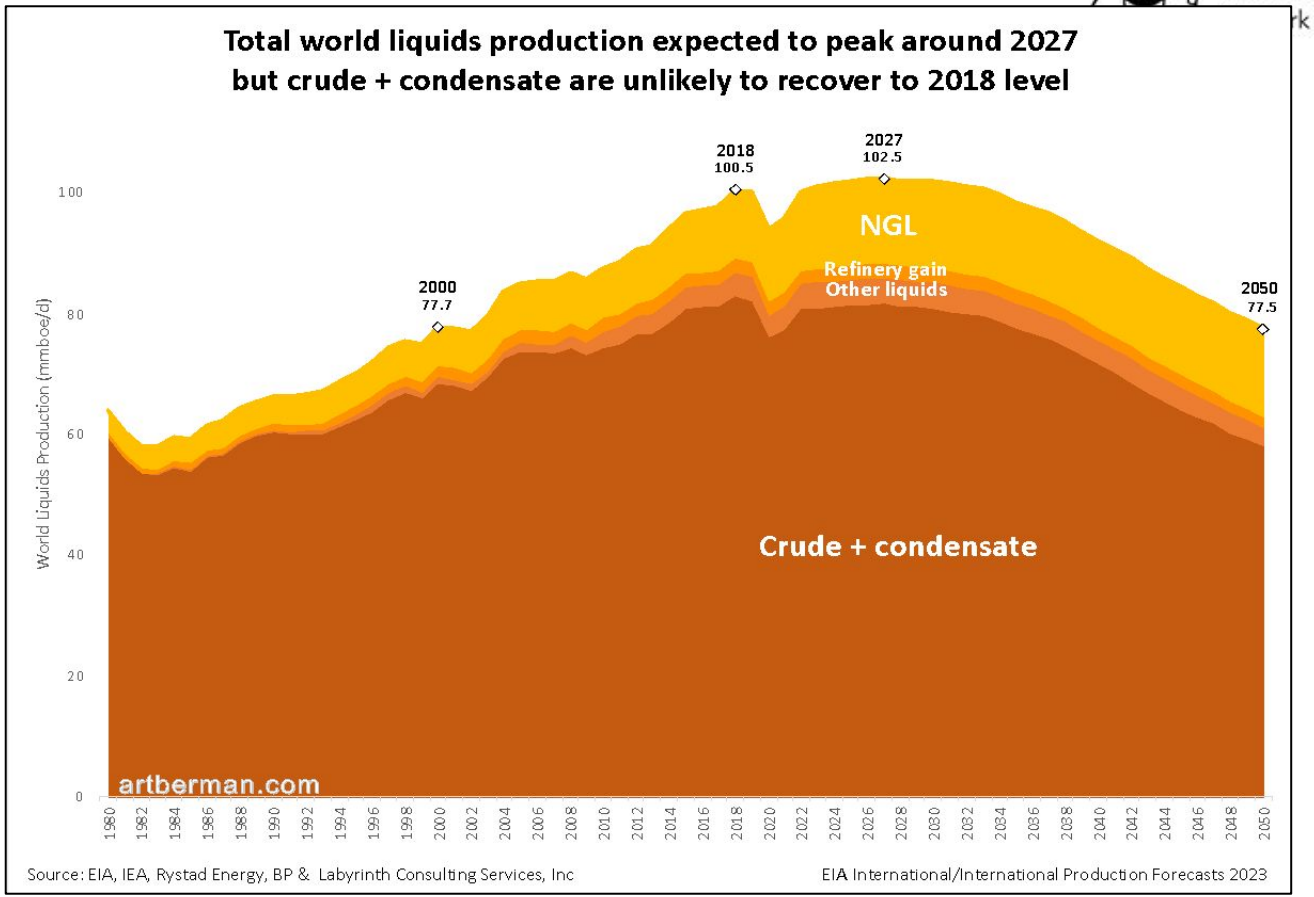
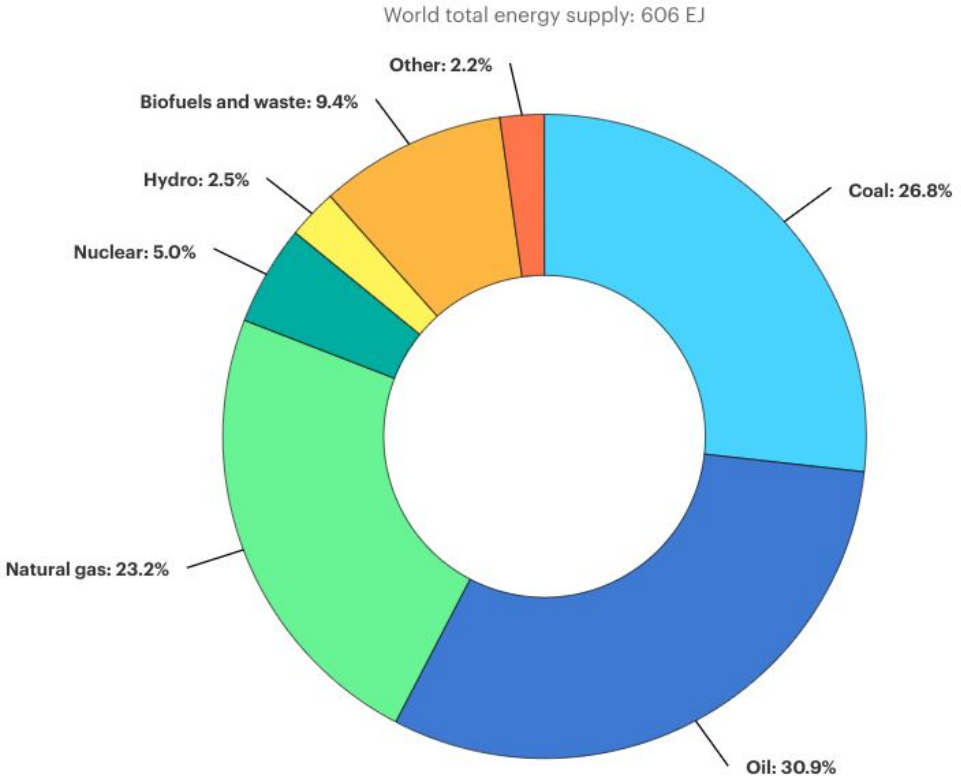
[IEA Data] | [About Jeremiah Emanuel Josey]

Oil Has Peaked



Oil Is Important



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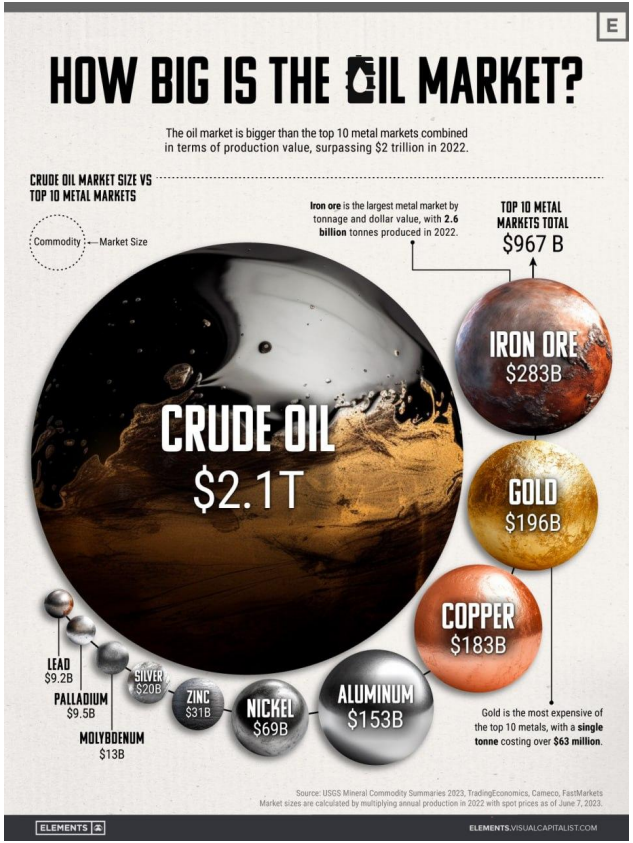

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[Dr. Simon Michaux] |

[About Jeremiah Emanuel Josey]

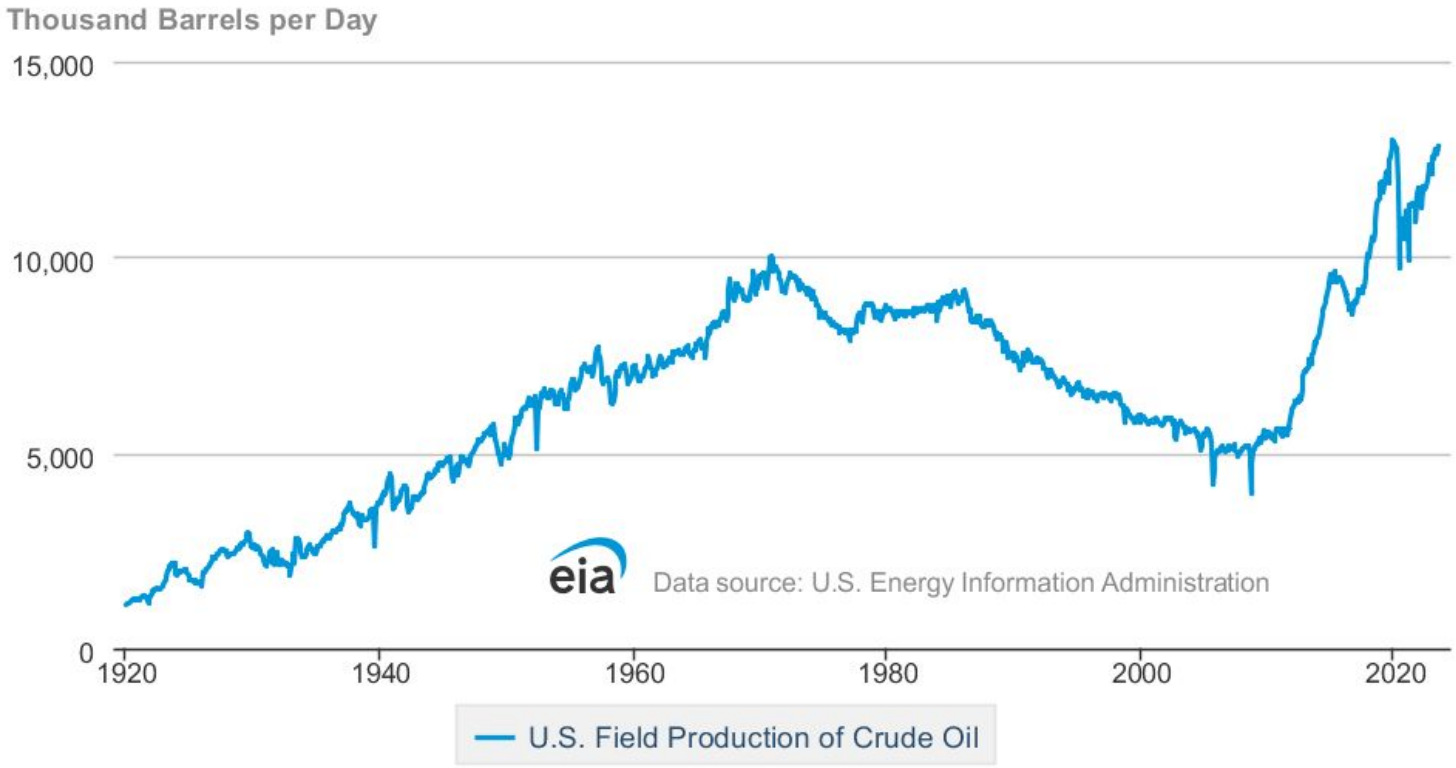
USA Will Never Let Go of the Debt Merry-Go-Round

Fracking

Cheap Debt

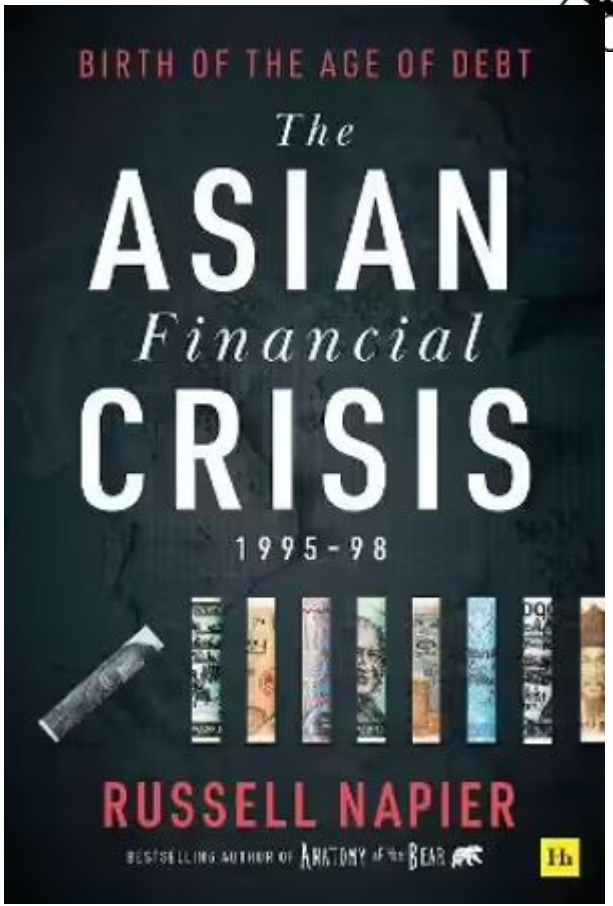
Expensive Oil

“Petro Dollar”



The Work of Russell Napier

- International Buyers of US T- Bonds drying up
- New Western Strategy: Expropriation of retirement funds to purchase government debt - eating your own fingers
- Is this the straw that breaks the camel's back for the "west"?
- In any case, the USD will be the "last man standing" as the West sinks under debt.



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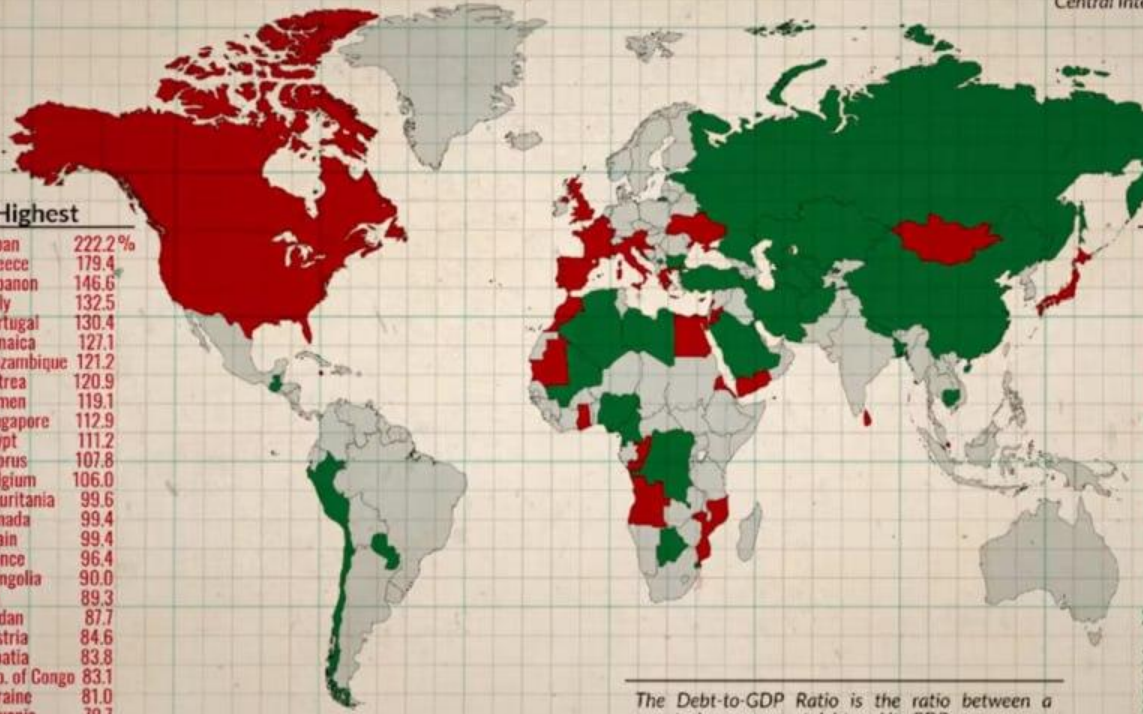
30 Countries with the Highest and Lowest Debt-to-GDP Ratio

*Not included countries with less than 1 million inhabitants

Source:
The World Factbook,
Central Intelligent Agency (CIA)
2016



Highest

1.	Japan	222.2%
2.	Greece	179.4
3.	Lebanon	146.6
4.	Italy	132.5
5.	Portugal	130.4
6.	Jamaica	127.1
7.	Mozambique	121.2
8.	Eritrea	120.9
9.	Yemen	119.1
10.	Singapore	112.9
11.	Egypt	111.2
12.	Cyprus	107.8
13.	Belgium	106.0
14.	Mauritania	99.6
15.	Canada	99.4
16.	Spain	99.4
17.	France	96.4
18.	Mongolia	90.0
19.	UK	89.3
20.	Jordan	87.7
21.	Austria	84.6
22.	Croatia	83.8
23.	Rep. of Congo	83.1
24.	Ukraine	81.0
25.	Slovenia	79.7
26.	Sri Lanka	79.3
27.	Ghana	78.1
28.	Morocco	77.5
29.	Angola	77.2
30.	United States	76.5

The Debt-to-GDP Ratio is the ratio between a country's government debt and its GDP.
A low Debt-to-GDP ratio indicates an economy that produces and sells goods and services sufficient to pay back debts without incurring further debt. (Wikipedia)

Lowest

1.	East Timor	0.0%
2.	Libya	7.4
3.	Afghanistan	8.3
4.	Estonia	9.5
5.	Russia	10.0
6.	Iran	13.4
7.	Nigeria	14.3
8.	Uzbekistan	15.4
9.	China	16.1
10.	Kuwait	17.3
11.	Congo, DR	17.6
12.	Algeria	18.0
13.	Botswana	18.1
14.	Kosovo	20.6
15.	Chile	21.3
16.	Saudi Arabia	22.3
17.	Paraguay	22.4
18.	Equat. Guinea	23.1
19.	Peru	23.8
20.	Turkmenistan	23.9
21.	Kazakhstan	26.2
22.	Bangladesh	26.9
23.	Nepal	27.3
24.	Swaziland	27.5
25.	Cambodia	29.1
26.	Guatemala	29.2
27.	Turkey	29.4
28.	Bulgaria	29.5
29.	Mali	29.7
30.	Cameroon	30.5

Why the Heat Against Nuclear

7 Billion USD for Uranium that supplies 10% of world Electrical energy - 30 EJ

Total World Demand: 600 EJ

300 EJ transport

300 EJ Electricity

Nuclear is 10% of the Electrical

Fossil Fuels are ~100% of the Transport

Solid Fission Uranium Fuel Cost per year => 140 Billion USD per year

Powering the World on Solid Fission Uranium (Conventional Nuclear)

USD 240 Billion per year

versus more than 5 Trillion for Fossil Fuels

=> ~97% reduction in energy fuel costs

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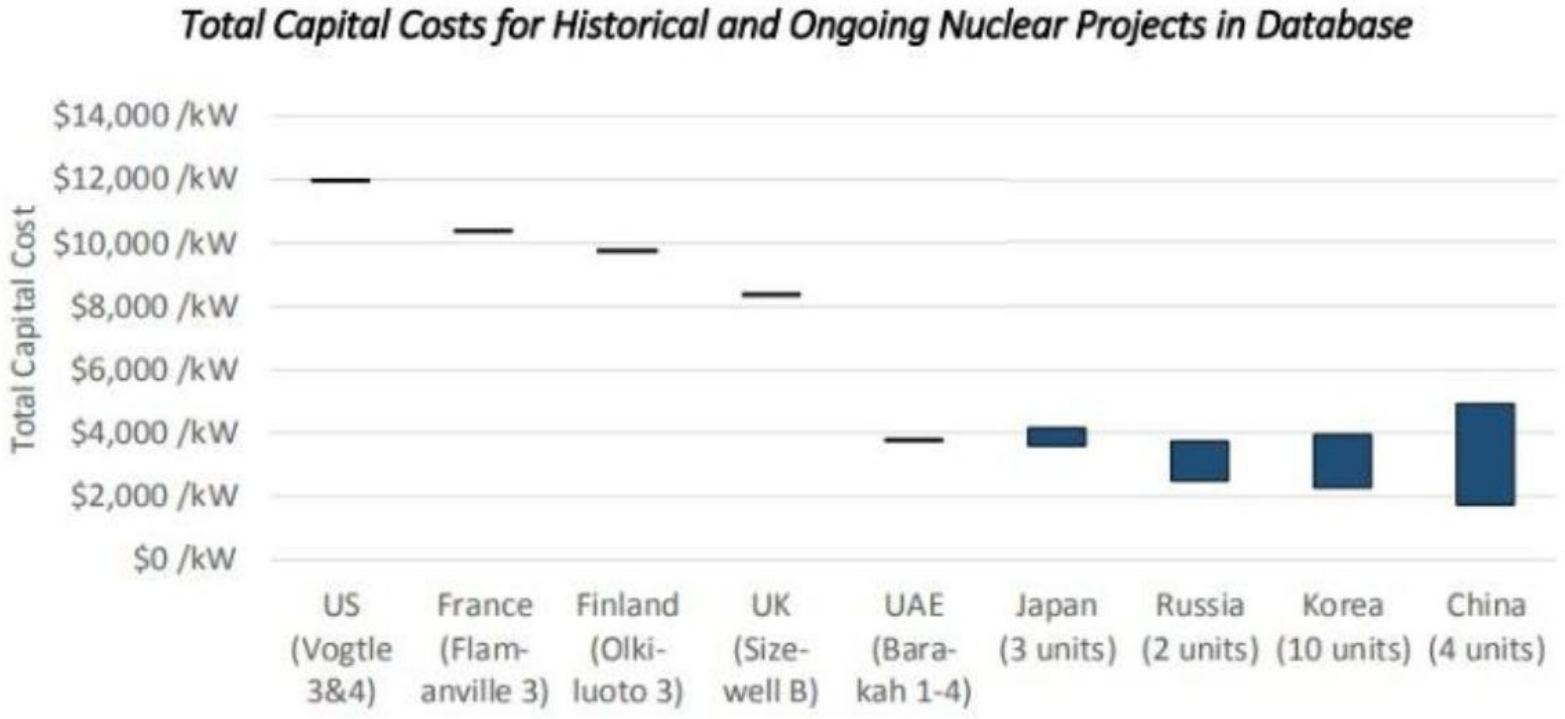
ETI Nuclear Cost Drivers Project



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ECONOMICS OF NUCLEAR

Cost Report / Nuclear Is 'Most Affordable Dispatchable Source Of Low-Carbon Electricity'

By David Dalton
9 December 2020

Reactors in long-term operation are even more cost-effective, data shows

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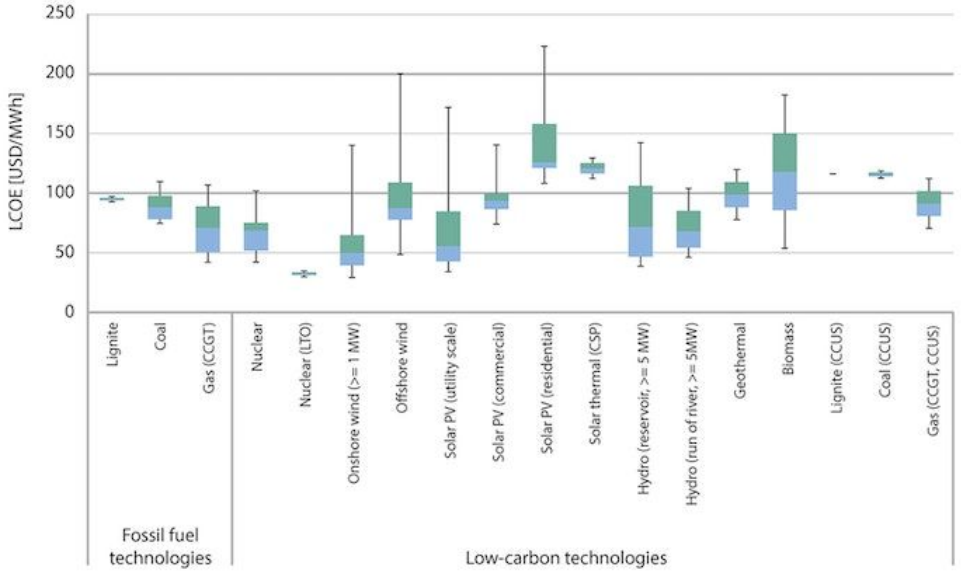
Figure ES1: LCOE by technology



Note: Values at 7% discount rate. Box plots indicate maximum, median and minimum values. The boxes indicate the central 50% of values, i.e. the second and the third quartile.

iea International Energy Agency

NEA NUCLEAR ENERGY AGENCY

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We don’t need climate change or ESG to make Fission energy cool

1 billion people arriving in Africa from now until 2050

1 billion more arriving in South East Asia from now until 2050

(Mind the Gap)

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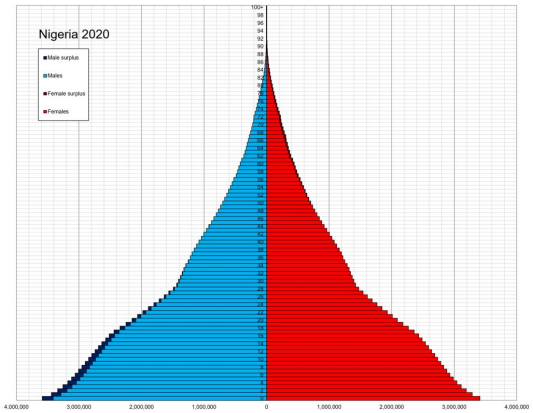
Population Pyramids

Demand side Drivers

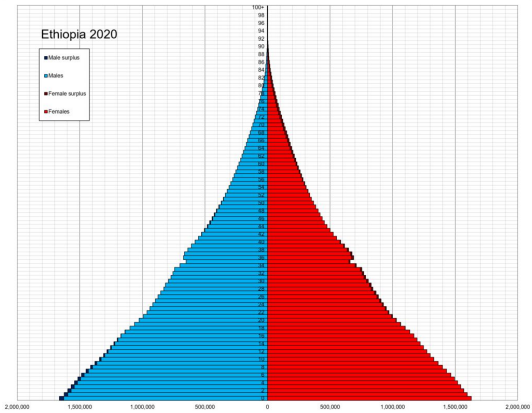
Know them.

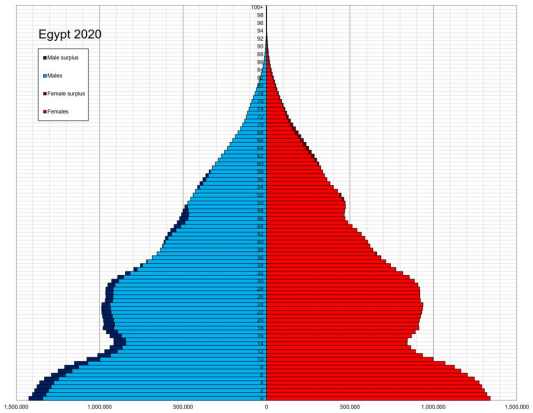
Follow them.



Africa Population 2023

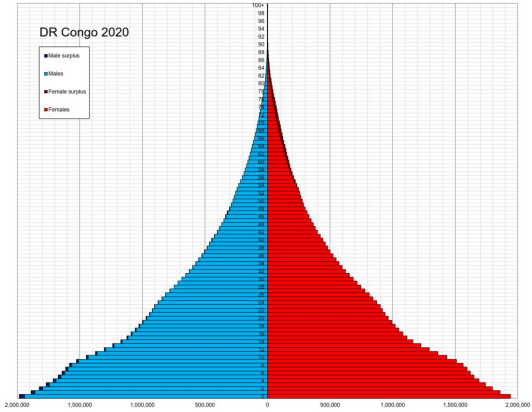
1,460,476,458

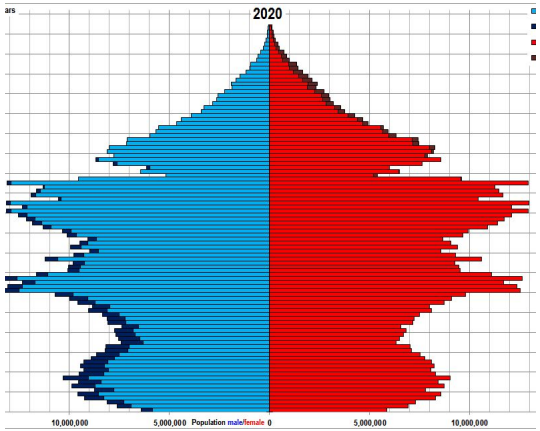




Africa Population 2050

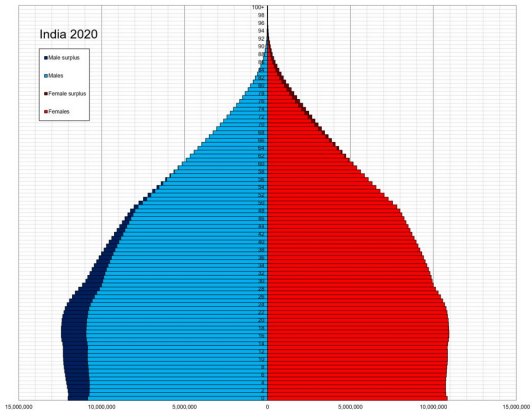
2,500,000,000

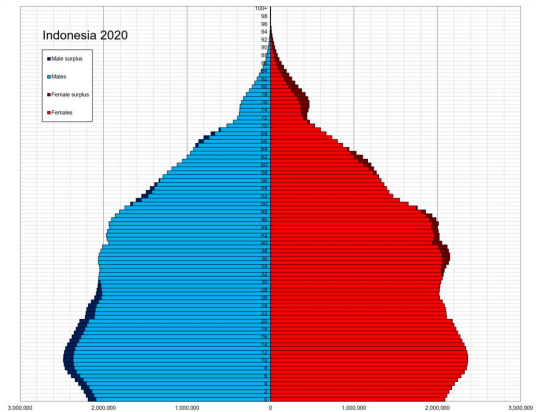




Asia Population 2023

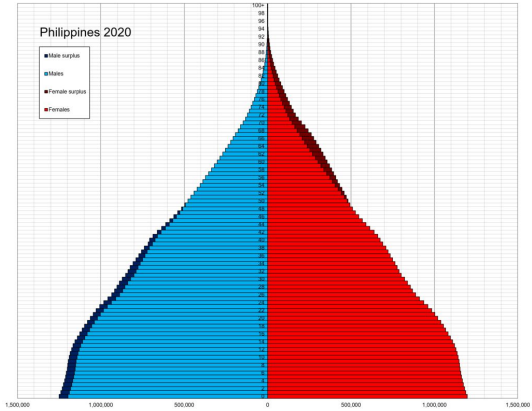
4,751,819,588

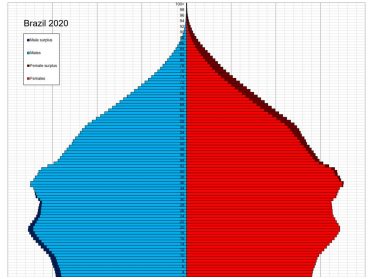


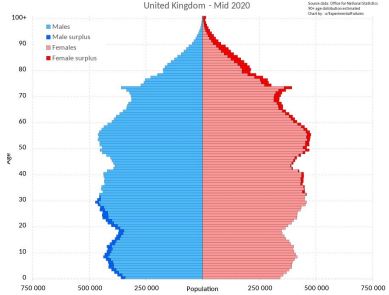


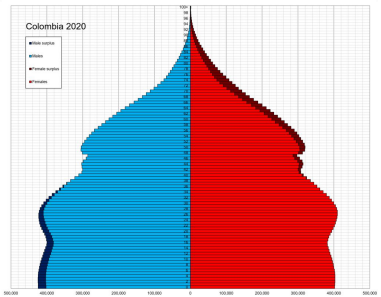
Asia Population 2050

5,800,000,000







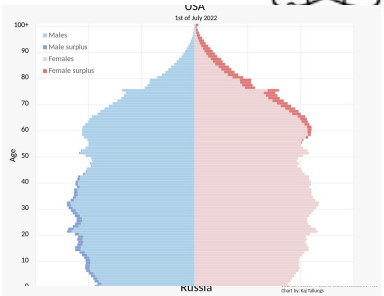


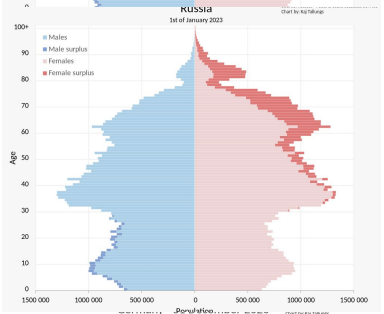
Rest of World 2023

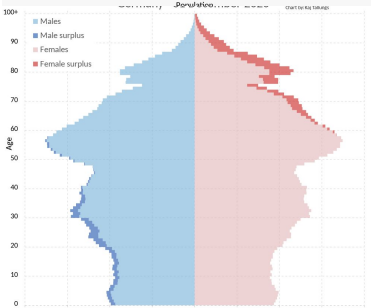
1,831,319,344

Rest of World 2050

2,000,000,000







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Energy Use per Person

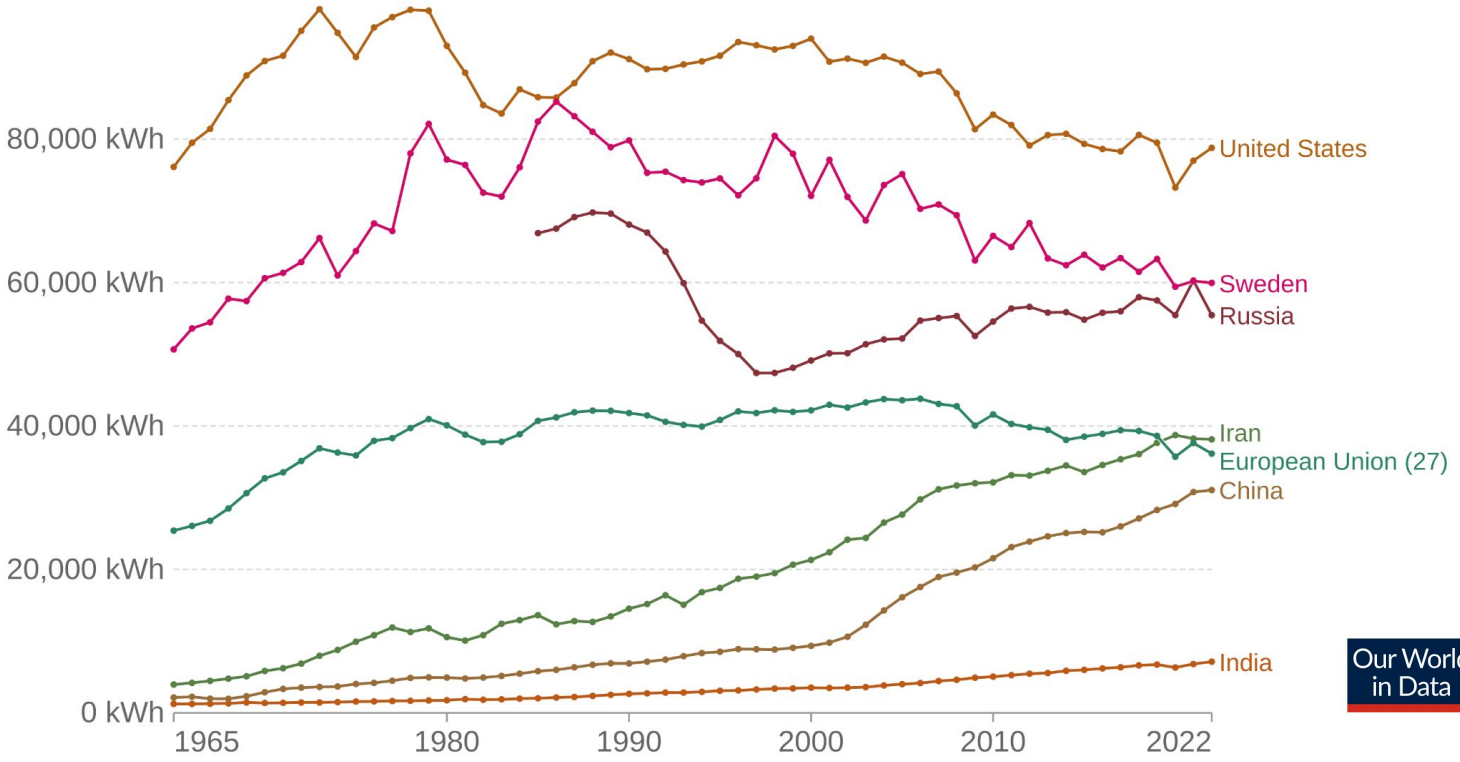
All forms:

Electricity

Transport

Heating

Cooking



Nuclear is the best for long term family wealth planning

At costs under 5 m USD MW installed, and life times possibly up to 100 years from one facility, ROI is very healthy.

100 MW unit

Large Units

5,000 MW installed = 25 billion USD

Produces 40,000,000 MWh of electricity per year (capacity factory 90%)

@ USD 125 per MWh (The price that Akkuyu charges the government of Turkey)

ANd operating for 50 years

(Shipping port just renewed their licence for their 1972 machine to run for until 2045 - a total of 80 years…)

Total Income: 250 Billion Euros

Proect ROI:: 750 %

Annual 17%

Small Machines

5,000 MW installed = 25 billion USD

Produces 40,000,000 MWh of electricity per year (capacity factory 90%)

@ USD 125 per MWh (The price that Akkuyu charges the government of Turkey)

ANd operating for 50 years

(Shipping port just renewed their licence for their 1972 machine to run for until 2045 - a total of 80 years…)

Total Income: 250 Billion Euros

Proect ROI:: 750 %

Annual 17%

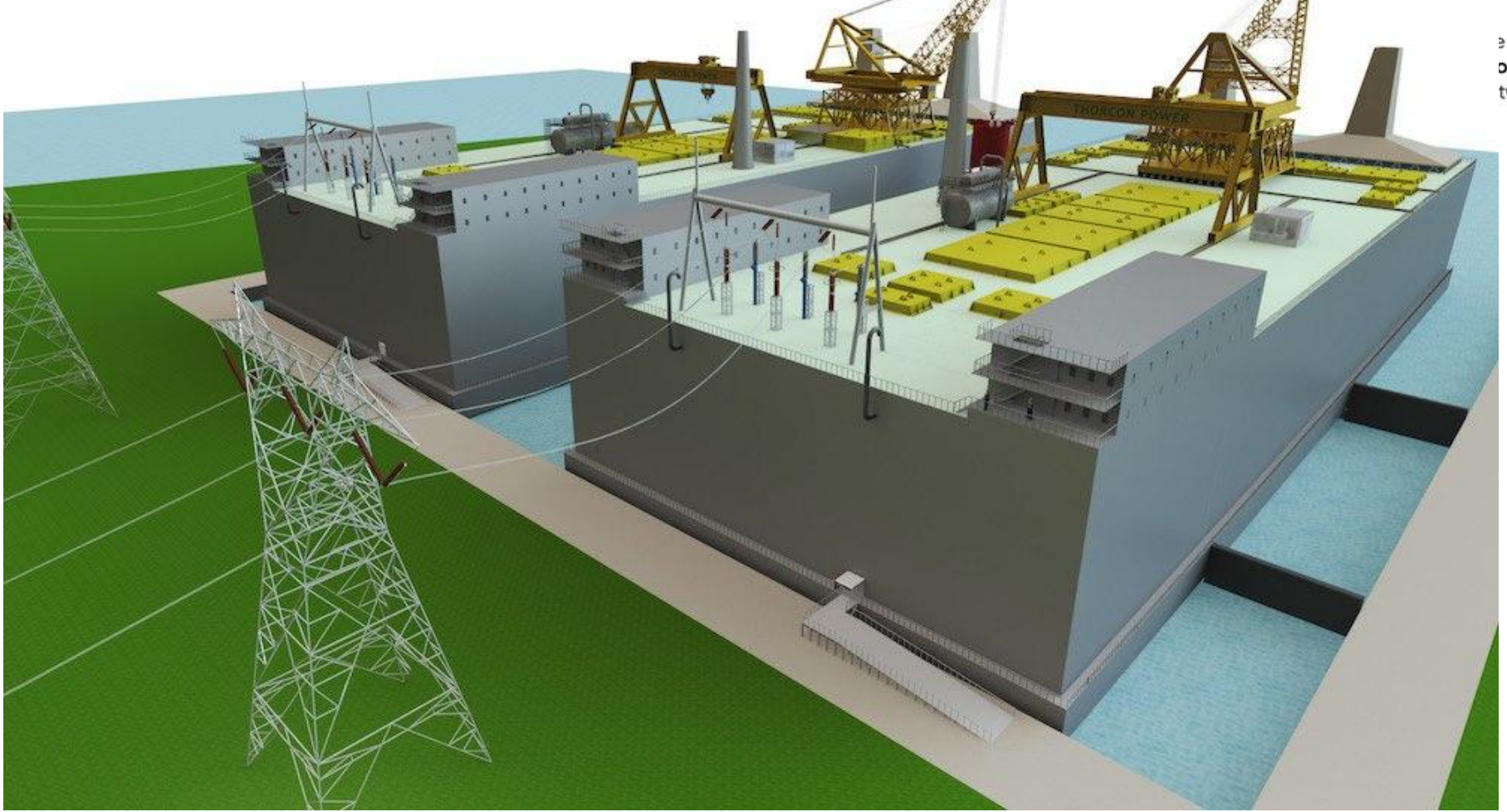
Which Type of Fission?

1000 ways…

Solid Fission Uranium

Liquid Fission Thorium

Or Liquid Fission Uranium



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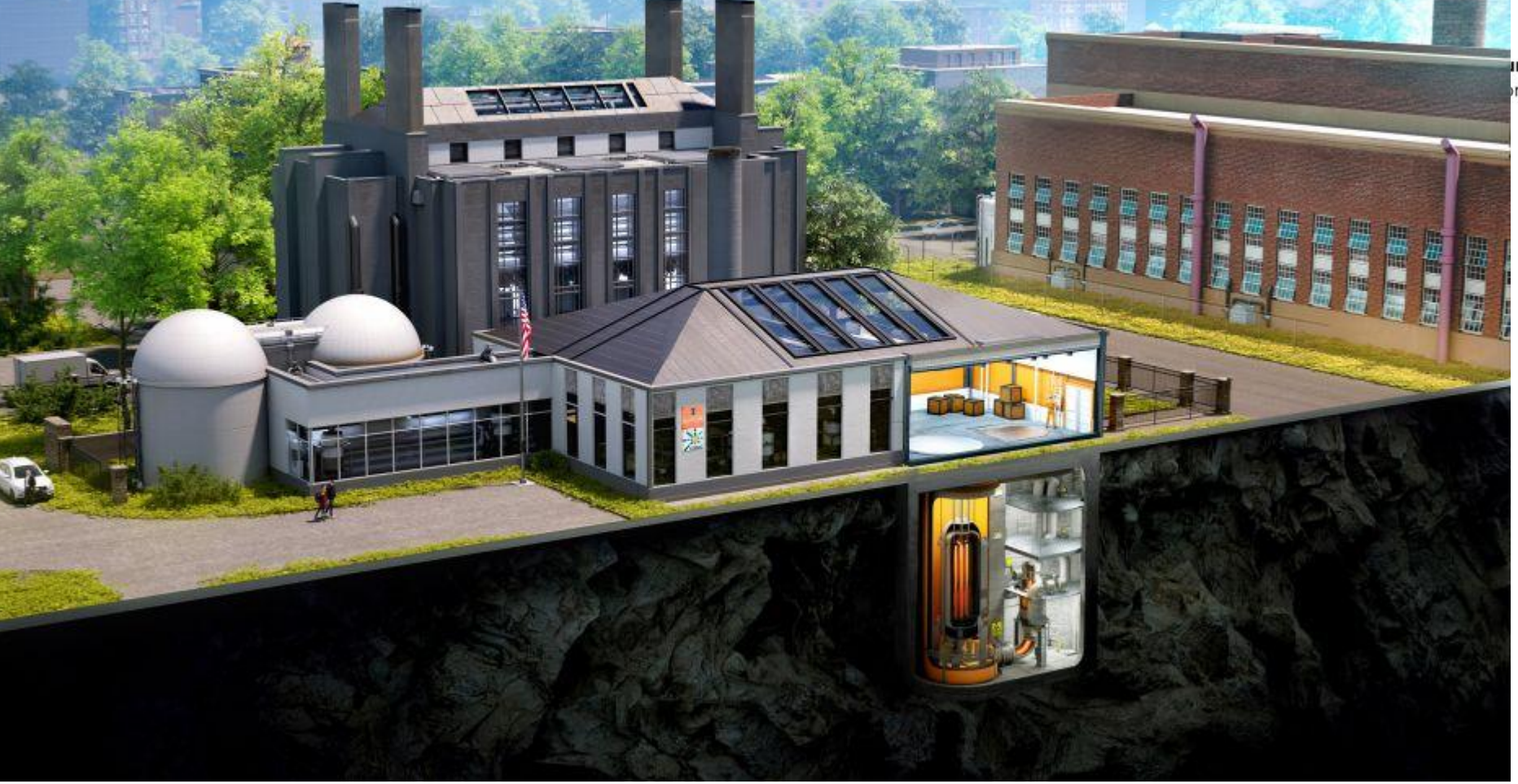

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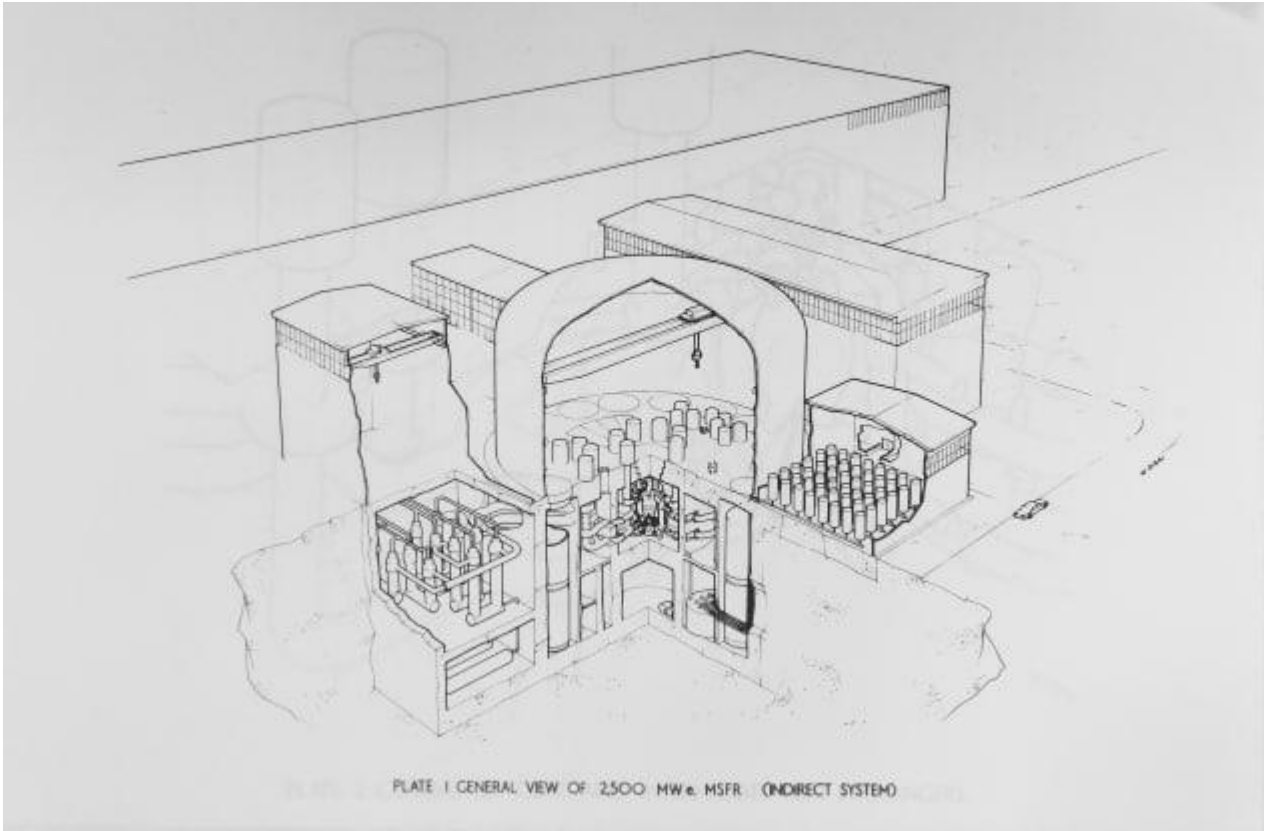
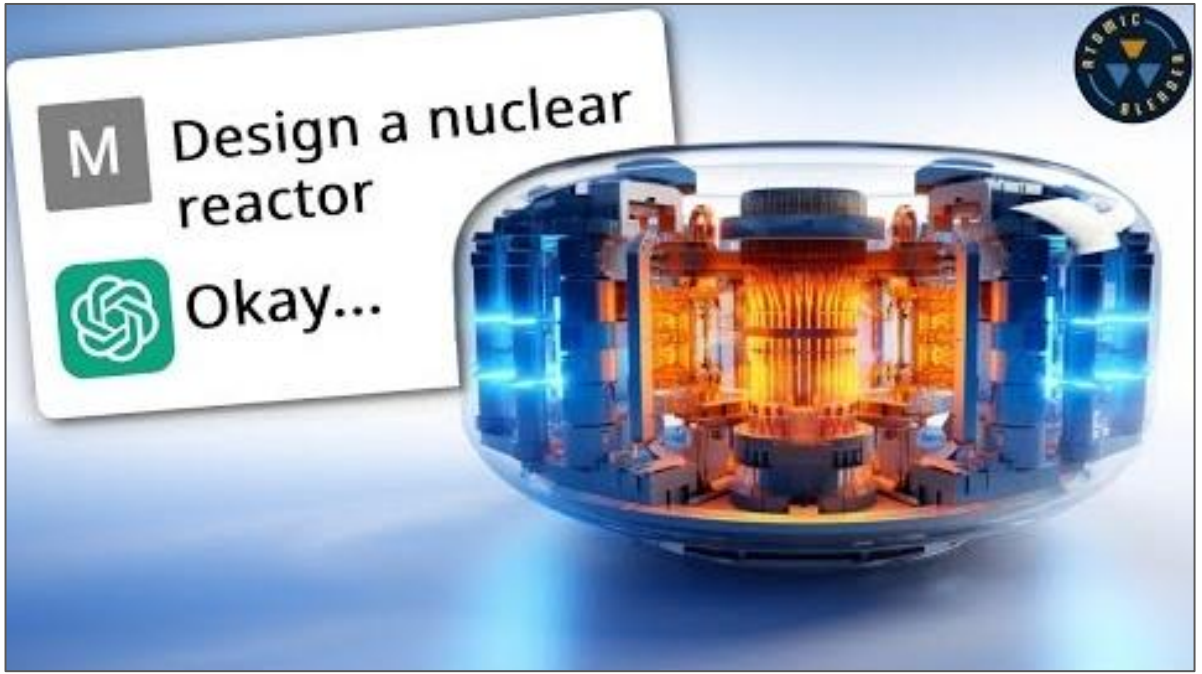


PLATE I GENERAL VIEW OF 2,500 MWe MSFR (INDIRECT SYSTEM)

Artificial Intelligence Asked to Build Best Machine

Created Liquid Fission Thorium Machine



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China

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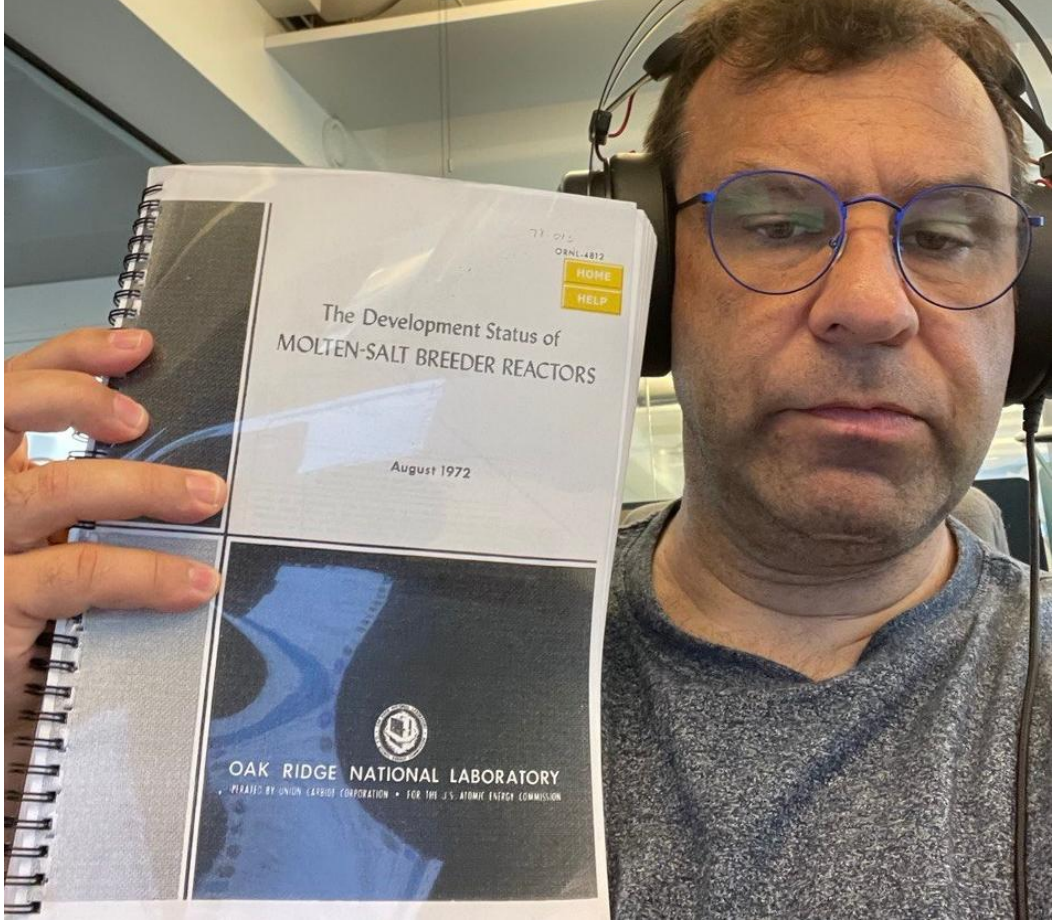
硬核熊猫说
中國黑科技
釷基熔鹽反應堆



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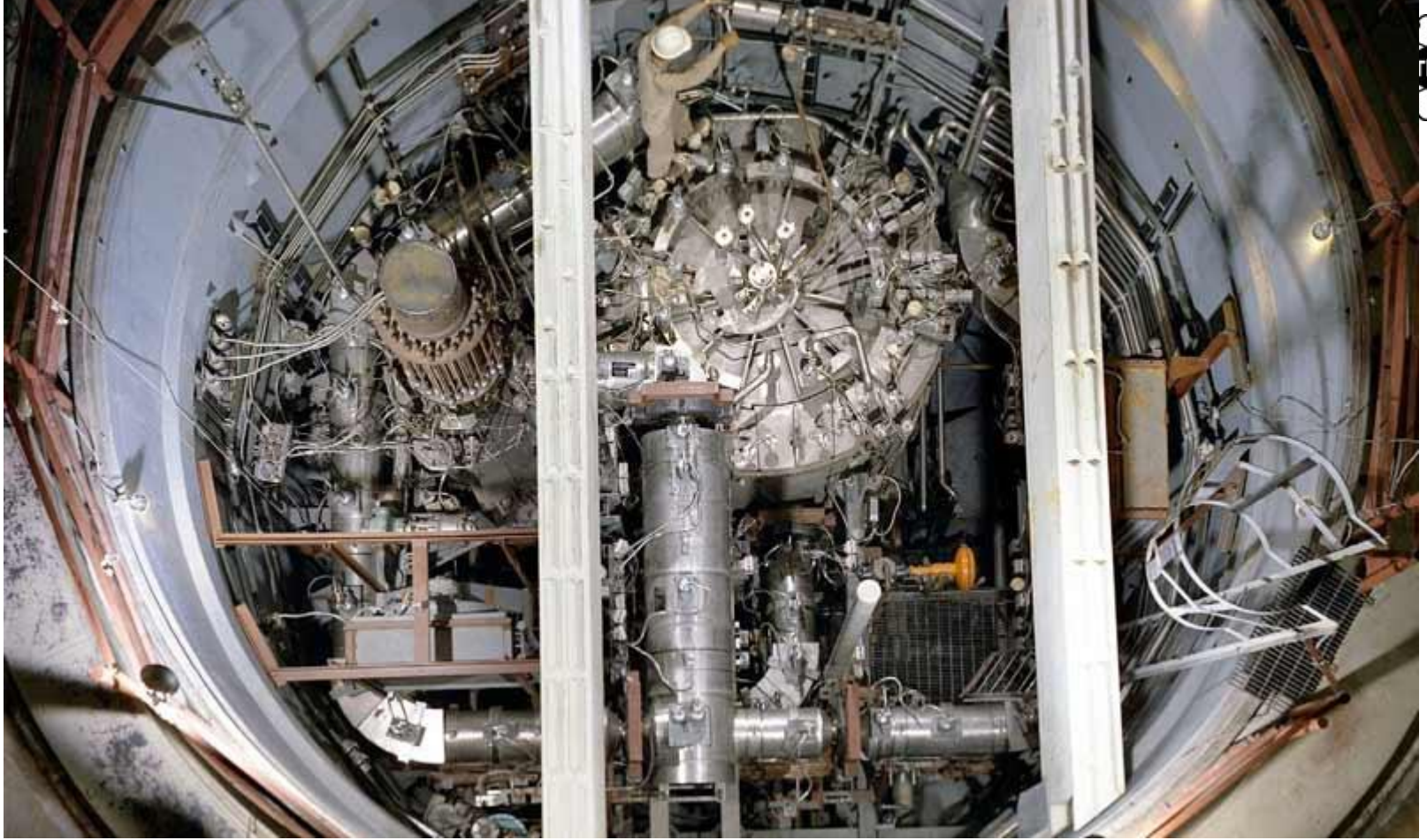

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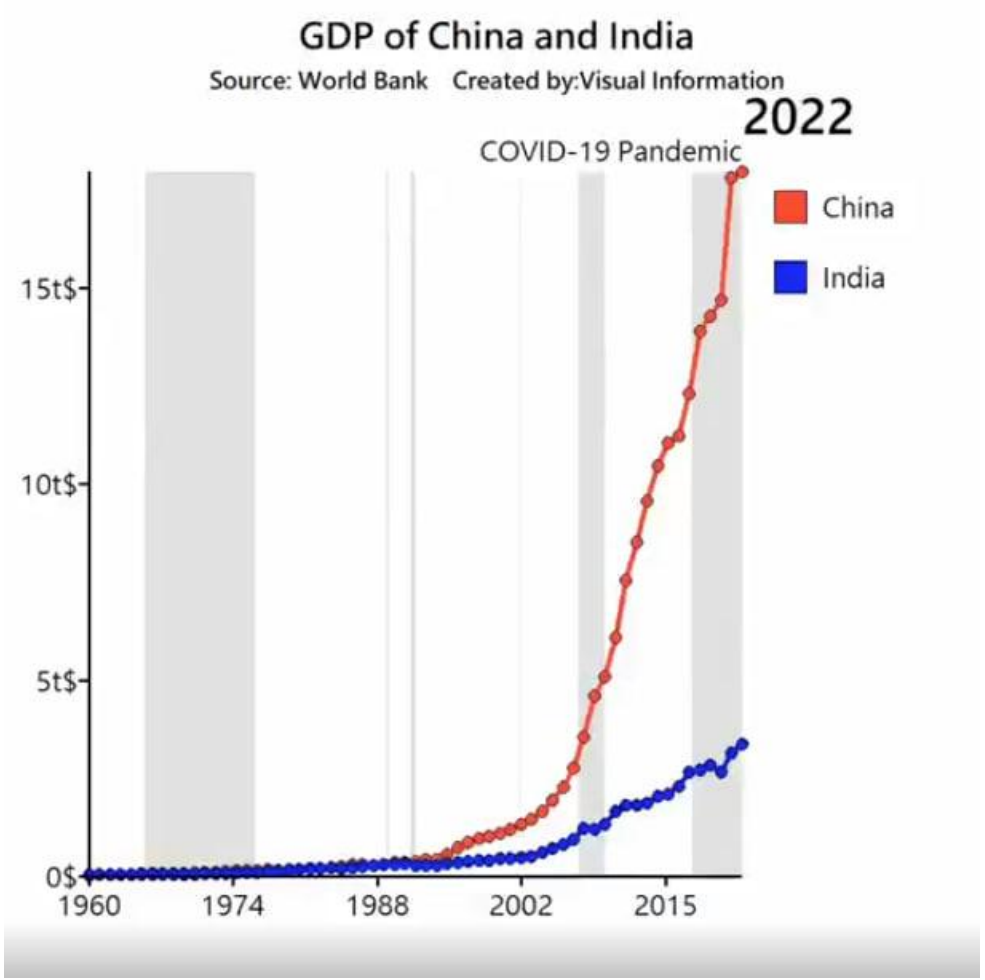
China can do it

India can not



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High Speed Rail

40,000 km 2023
200,000 km 2035

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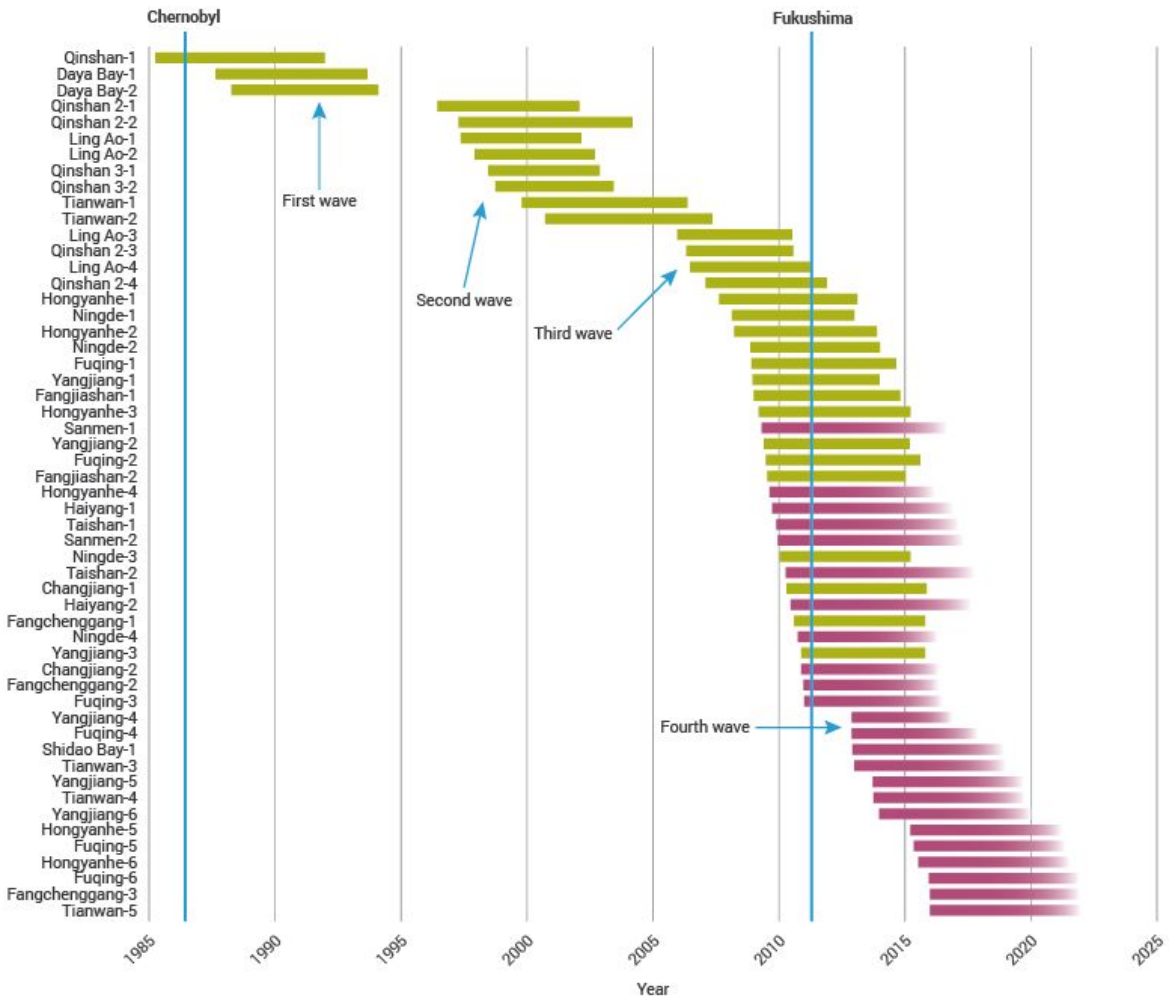
China Nuclear Energy

57 GW in 2023

150 GW by 2030



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Nuclear Power Plants in China

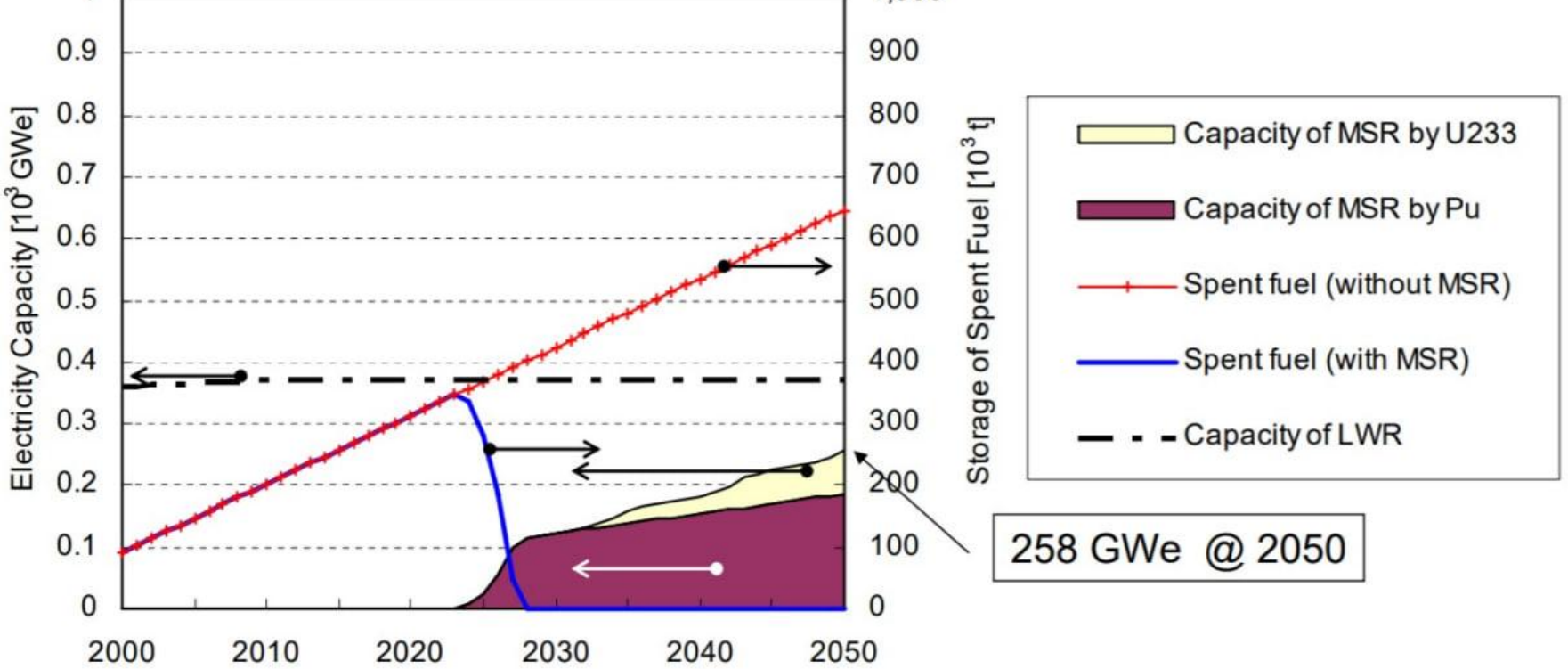
Investment Areas

Business Areas

Not Fuel - plenty above ground, breeders, 1,000 so years of supply

Thorium is abundant as lead… lead is useful, but low price.

Not Machines - simple (ICE level complexity)



Implementation of thorium MSR for the constant LWR scenario.
(Considering effect of Fukushima Daiichi accident: 370 GWe of LWR till 2030)

Why the Green Dream is a Train Wreck Waiting To Happen

Element	Demand (Tonnes)	Reported Global Reserves 2022 USGS (Tonnes)	Global Reserves
Copper	6 161 095 584	880 000 000	14.28%
Nickel	1 251 201 027	95 000 000	7.59%
Lithium	1 274 159 814	22 000 000	1.73%
Cobalt	292 940 367	7 600 000	2.59%
Graphite (natural flake)	12 123 649 713	320 000 000	2.64%
Vanadium	923 955 385	24 000 000	2.60%

From Dr. Simon Michaux Work

Metal Investability - Based on Michaux's work

Metal	Demand Pressure	Current Market Volume (Tonnes) 2022	Current Market Size (€ billion) 2022	Market Potential (€ billion)
Lithium	**57**	568 000	16	912
Cobalt	39	176 000	7	273
Vanadium	38	124 000	3.4	129
Graphite (natural flake)	38	1 200 000	5.9	224
Nickel	13	3 400 000	32	416
Copper	7	24 500 000	160	1 120

Size of Potential Fission Nuclear Market

2023 - Nuclear Fleet 450 Machines. Providing 5% of the world's energy (10% electrical).

100% Conversion: 9,000 using large capacity (1,500 MW to 6,000 MW)

Up to 100,000 Small Machines if 100 MW is the size

CF 2,400 Coal Fired Power Stations Worldwide Today

https://en.wikipedia.org/wiki/List_of_nuclear_power_stations

New Builds - To Own or On Sell

Factory Fabrication

Consulting

Engineering and Construction

Medical Isotopes manufacture

Specialty Isotope manufacture

In theory, nuclear could add clean power generation faster than any other source.

Nuclear is a million times more energy dense than coal or gas.

A nuclear plant has no emissions.

Nuclear offers the reliable, 24/7 electricity the planet desperately needs.

Cracks in the Dam

China installing more than half of the worlds nuclear fleet in the next few years

UAE raises radiation exposure limits acknowledging the fraud of the international community

Russia builds more nuclear out-of-country than anyone else

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Nuclear Energy

- Save Lives
- Save the Planet
- Build Massive Generational Wealth