

# Fusion Energy

What Are The Benefits?

How can a  
regular person  
invest in fusion  
energy?

Question asked by a student  
At the PPPL June course:  
Introduction to fusion energy  
and plasma physics

Professor of Nuclear Physics at Princeton  
Plasma Physics Lab:

If I knew the answer  
to that, I'd be rich!

# 1.5 Billion People are Energy Poor - Today!

What Would  
*Your* Life  
Be Like  
Without  
Electricity?



By Paige Donner  
co-Founder, FrontierDAO



What will  
your life  
look like  
with

super abundant energy?



**Fusion**

# Clean Energy

**Fusion Energy Does Not Emit The Kinds of Pollutants That Fossil Fuels Do**

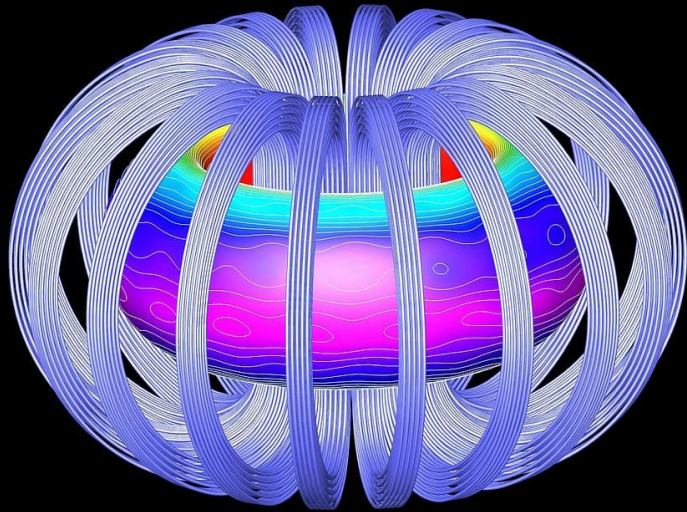
**Like Coal**

**&**

**Gas/ Oil**



# Fusion Energy Does Not Emit Radioactive Waste (not anywhere near the levels of Nuclear Fission)



Fusion



Nuclear Fission



- Many regions of the globe are facing drought.
- Many others have scarce supply of potable water for drinking and for hygiene.
- Yet we are surrounded by oceans - 71% of Earth is Water



# Clean Water

**Desalination is A Potential Solution**

**But it is energy intensive!**

**And therefore prohibitive today for sustainable production.**





# Super Abundant Energy

Fusion Energy  
Once It is Commercially  
Deployable  
Will be So Cheap &  
So Abundant  
That It will easily  
power  
Desalination plants  
cost-effectively



And What Else?

**Fusion Energy = Super Abundant Baseload Energy**

Agriculture

Materials - concrete, sand, steel, plastics & polymers

New Cities

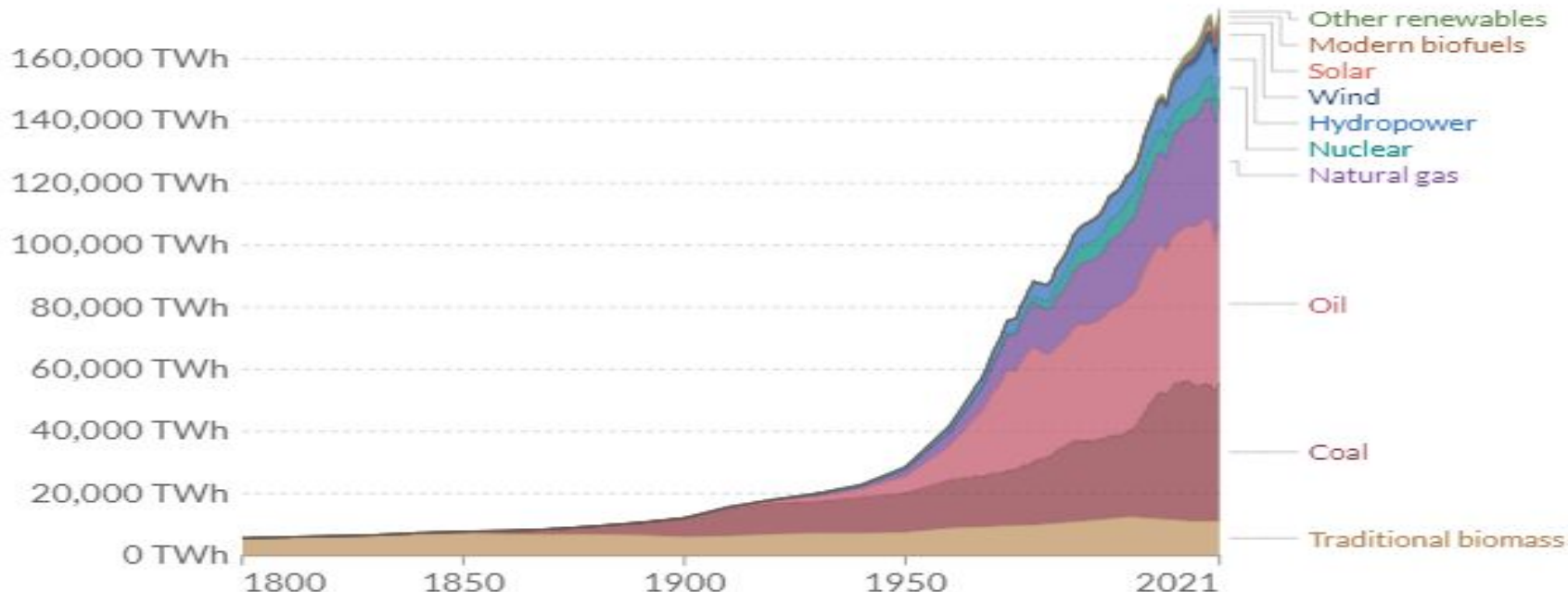
Developing World Infrastructure

Transportation

# Global primary energy consumption by source

Primary energy is calculated based on the 'substitution method' which takes account of the inefficiencies in fossil fuel production by converting non-fossil energy into the energy inputs required if they had the same conversion losses as fossil fuels.

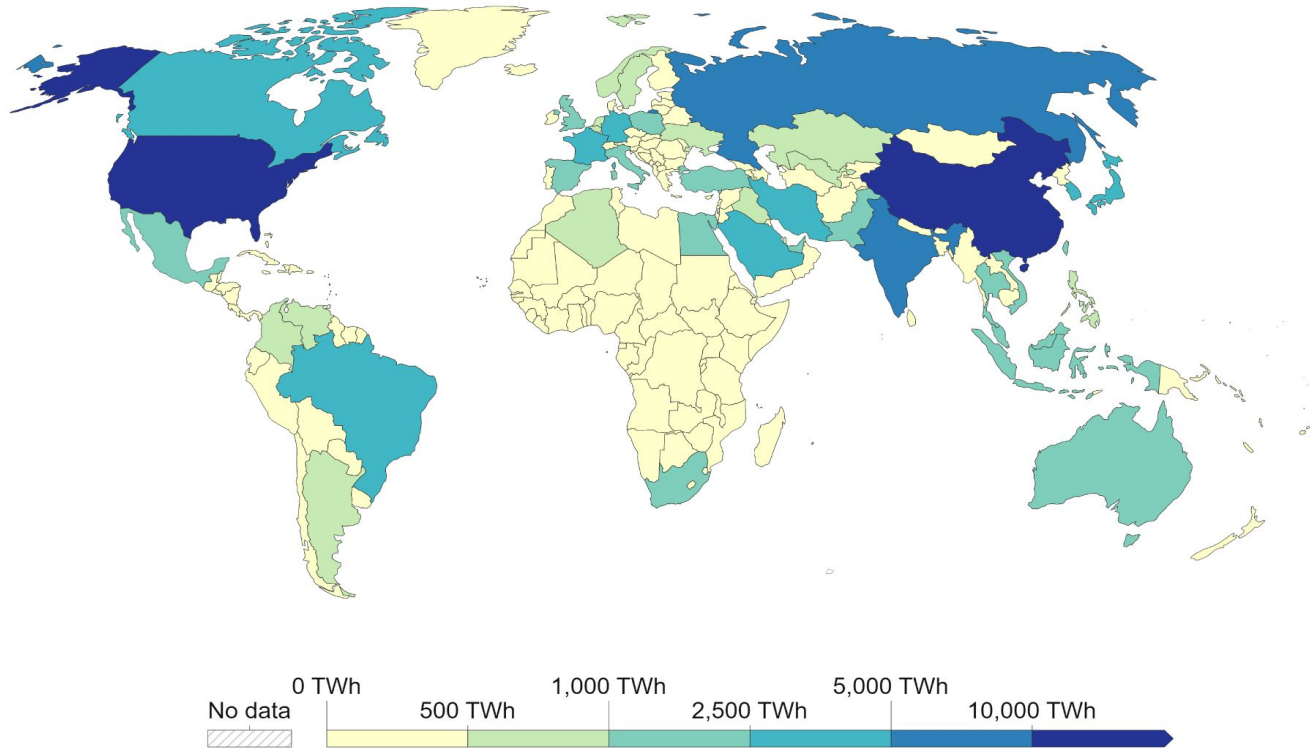
□ Relative



Source: Our World in Data based on Vaclav Smil (2017) and BP Statistical Review of World Energy  
OurWorldInData.org/energy • CC BY

# Primary energy consumption, 2021

Primary energy<sup>1</sup> consumption is measured in terawatt-hours (TWh).



Source: BP Statistical Review of World Energy; and EIA

Note: Data includes only commercially-traded fuels (coal, oil, gas), nuclear and modern renewables. It does not include traditional biomass.

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# Energy Super Abundance: How Cheap, Abundant Energy Will Shape Our Future

From: The Center for Growth & Opportunity  
Utah State University



When energy prices go down and efficiency goes up, the quantity of energy consumed increases rapidly.

**Without  
Energy  
No Life**



Only  
One  
Private  
Fusion  
Energy  
Startup  
Is Based  
In the  
Global  
South

**Australia**

# Why don't we have fusion energy on the grid today?



Lack of Coordination



Lack of Awareness

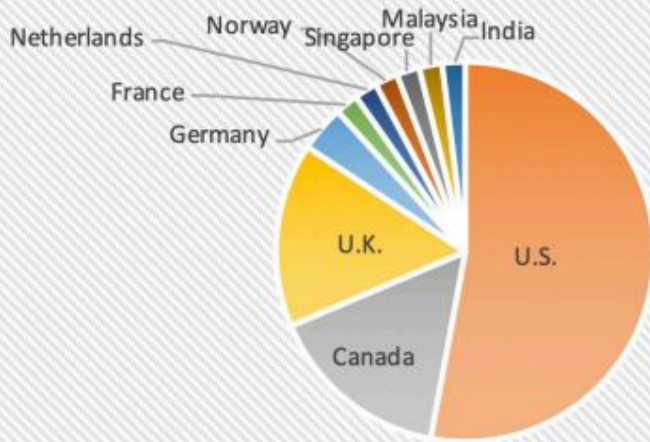


Lack of Focused Purchasing Behavior



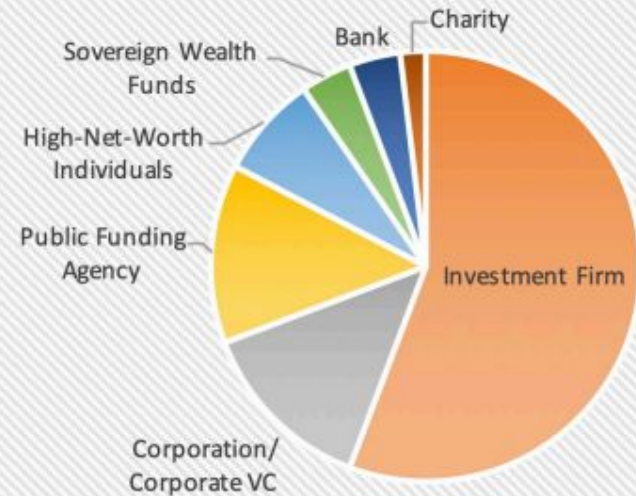
Lack of Democratic Investment Opportunities

## Breakdown of Private Fusion Investors by Country



(a)

## Types of Private Fusion Investors



(b)

**Like AI and the Space Race before it, Fusion Energy is shaping up to be another Billionaire Boy's Club**

**€79.2 B**

**LVMH Revenue for 2022**

**With profit at €21 B (recurring revenue)**

**Increase of 23%**



**\$4.7 B total**  
**For fusion energy As of 7/'22**

MIT Sloan Financing Fusion Energy 12/ 2022

<https://mitsloan.mit.edu/shared/ods/documents?PublicationDocumentID=9593>

**White House Fact Sheet on Fusion 3/2022**

<https://tinyurl.com/WhiteHouseFusionFactSheet>



Slow is smooth.

And smooth is fast.

- U.S. Military Saying



Frontier  
DAO

FrontierDAO.xyz



Join us in making Energy A Public Good For All!

Reach out to Paige Donner w/any questions [Linkedin.com/in/paigedonner](https://www.linkedin.com/in/paigedonner)