



**ECOS**

**Austin, TX**

**March, 2024**

**Energy/Environment  
Conundrum**



**Scott W. Tinker**



**BUREAU OF  
ECONOMIC  
GEOLOGY**



**It is the mark of an  
educated mind to be able  
to entertain a thought  
without accepting it.**

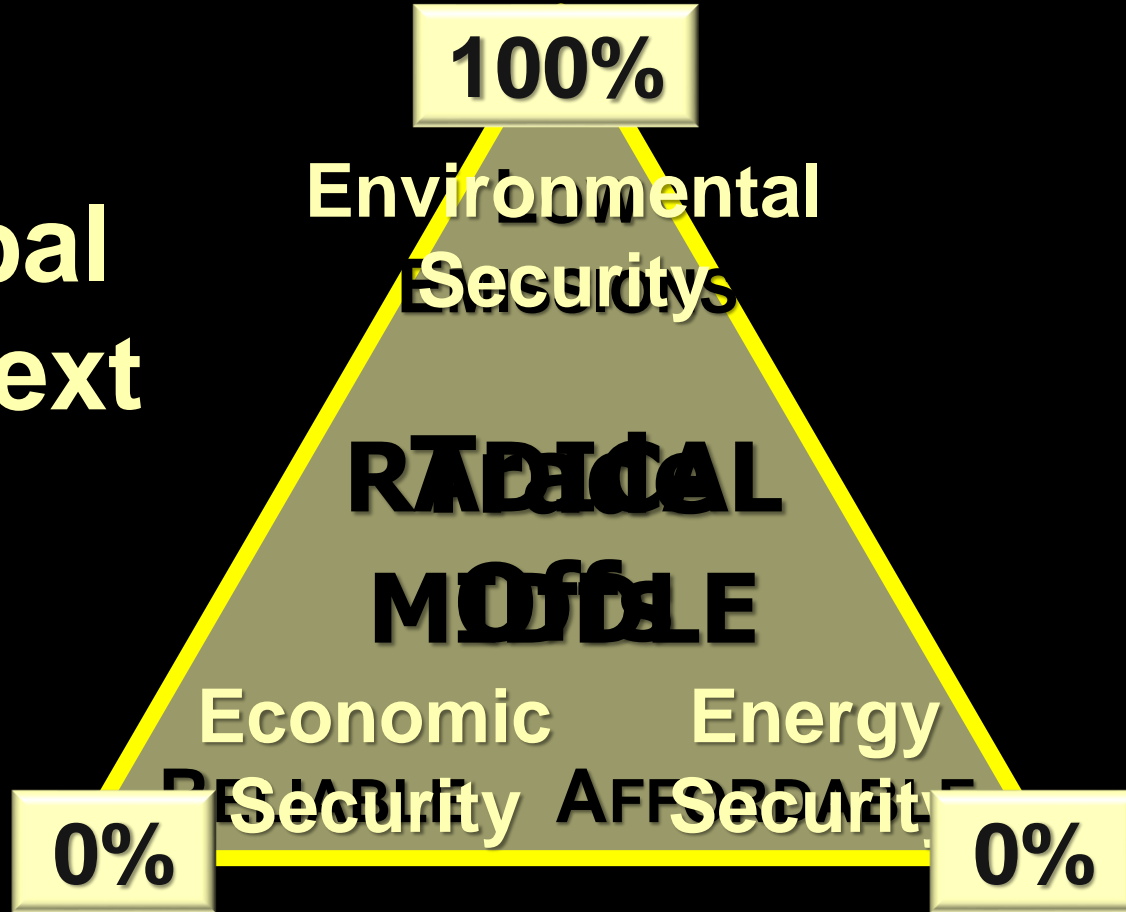
***-Aristotle***

# The Conundrum

How do we reduce  
environmental impacts **and**  
advance human flourishing?

***This Involves Trade Offs***

Global  
Context





# Pessimism & Fear

A woman wearing a white cap and light-colored clothing stands in a rural setting. She is positioned in front of a wooden structure that supports solar panels. The background is filled with lush green banana trees and other vegetation. The scene is brightly lit, suggesting a sunny day.

*It's Time to Power the People*  
**Energy Access for All**

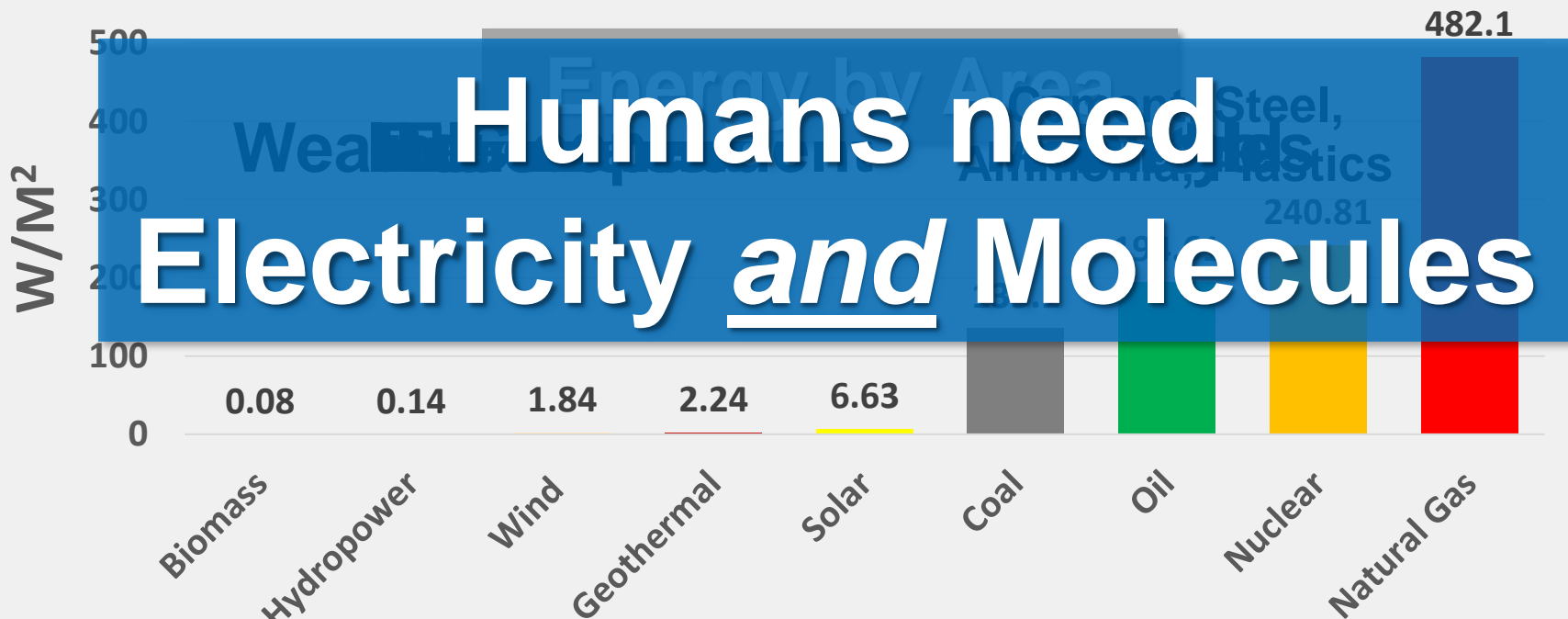
# “Energy Density”

[https://en.wikipedia.org/wiki/Energy\\_density](https://en.wikipedia.org/wiki/Energy_density)



# Energy Density

## Surface Power Density

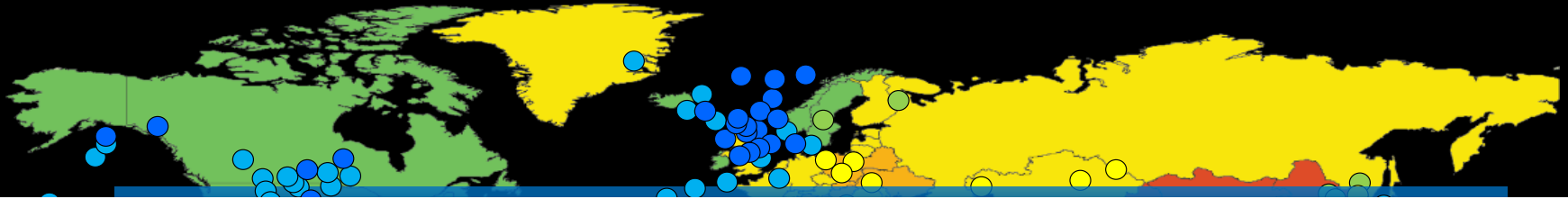




THERE ARE 3 KINDS OF PEOPLE  
IN THE WORLD.

# Energy is Vital for Human Flourishing

THOSE WHO ARE GOOD AT MATH,  
AND THOSE WHO AREN'T.



OPINION > ENERGY AND ENVIRONMENT

THE VIEWS EXPRESSED BY CONTRIBUTORS ARE THEIR OWN AND NOT THE VIEW OF THE HILL

# World's road out of poverty is paved by energy — and plenty of it

BY SCOTT TINKER, OPINION CONTRIBUTOR - 04/07/23 1:30 PM ET

f SHARE t TWEET ↗ ✉

## Per Capita Income

Least City Livability Most



Cleaner (<10)

Low

Dirtier (>80)

Particulate (PM2.5) Levels

High

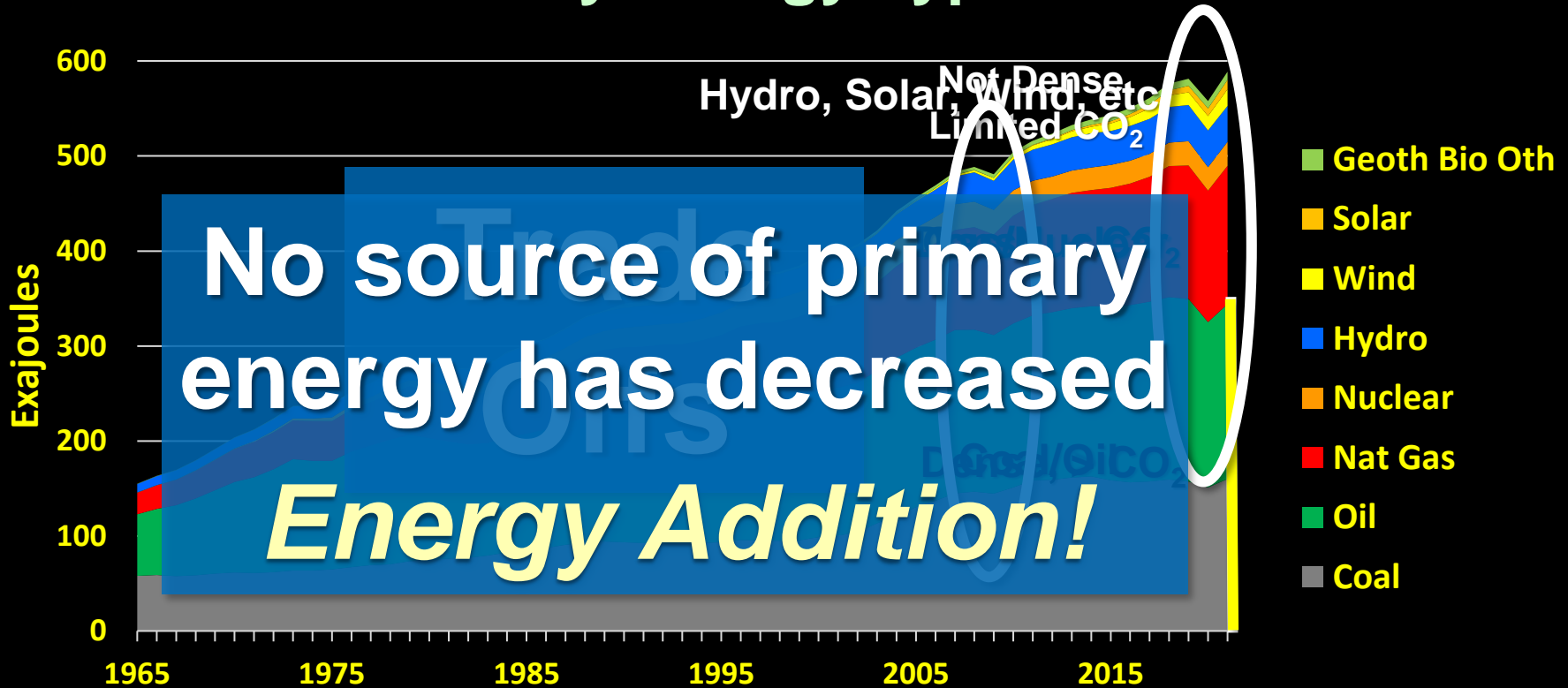
Source: World Health Organization

We must strive to be both  
*completely factual*, and  
*factually complete.*

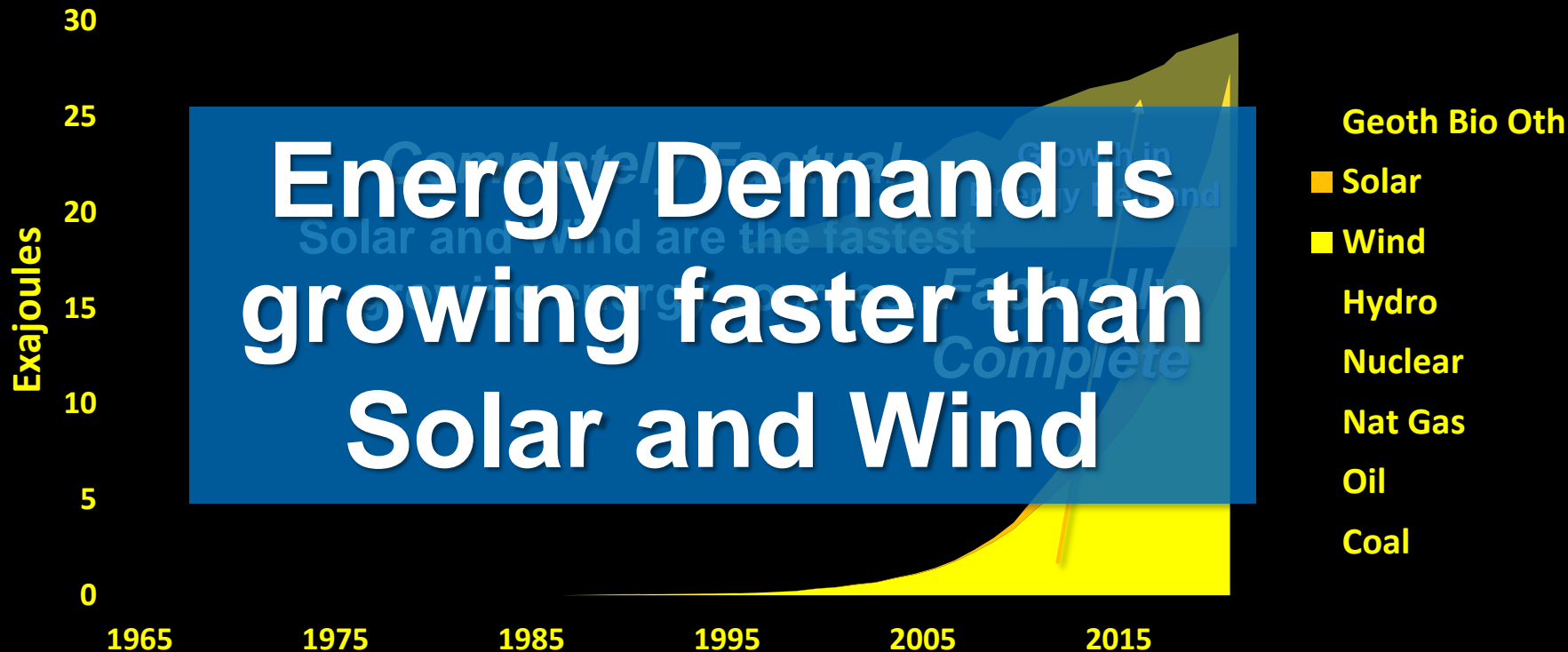


- 2021 Senate Testimony  
Manchin Climate Hearing

# Annual Primary Energy Consumption by Energy Type



# Annual Primary Energy Consumption by Energy Type



\$12,00

FP

ANALYSIS: **China Pledged to 'Strictly Control' Coal. The Opposite Happened.** | [View Comments \(1\)](#)

\$9,00

The Telegraph

[News](#) [Israel](#) [Ukraine](#) [Royals](#) [Sports](#) [Opinion](#) [Travel](#) [Life](#) [Entertainment](#) [Business](#) [Puzzles](#)

[Tech](#) [Markets](#) [Companies](#) [Economy](#)

# Coal use to hit a record high in 2023 despite net zero push

Rising usage in China and India drives demand

Jonathan Leake

15 December 2023 • 6:00am

By [Lauri Myllyvirta](#), the lead analyst at the Centre for Research on Energy and Clean Air, and [Byford Tsang](#), a senior policy advisor in E3G's London office.

2021



MARKETS

BUSINESS

INVESTING

TECH

POLITICS

CNBC TV

INVESTING CLUB

CLEAN ENERGY

# Leaders prioritize Energy Security over Climate Security

PUBLISHED TUE, APR 11, 2023 11:05 AM EDT. VISIT [CNBC.COM](#) FOR MORE.



**Catherine Clifford**

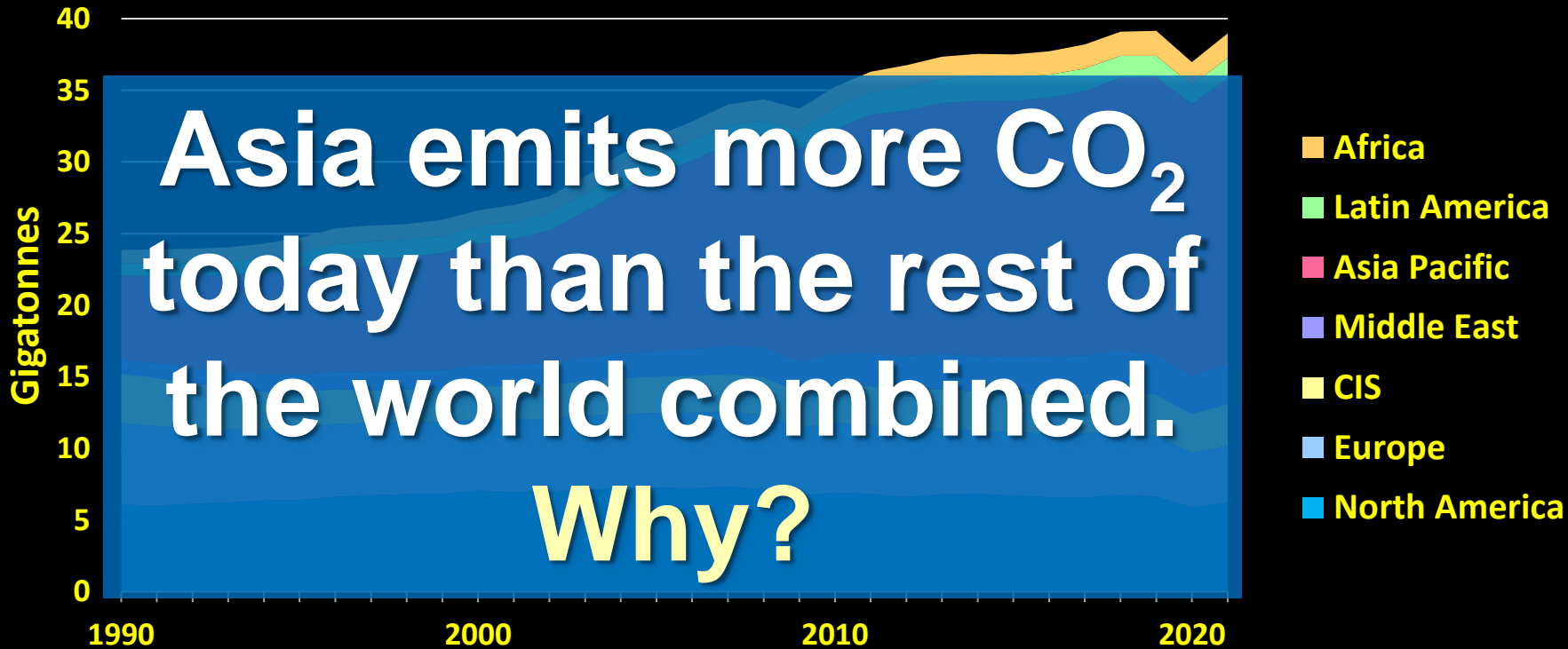
@IN/CATCLIFFORD/

@CATCLIFFORD

SHARE



# Annual CO<sub>2</sub> Equivalent Emissions

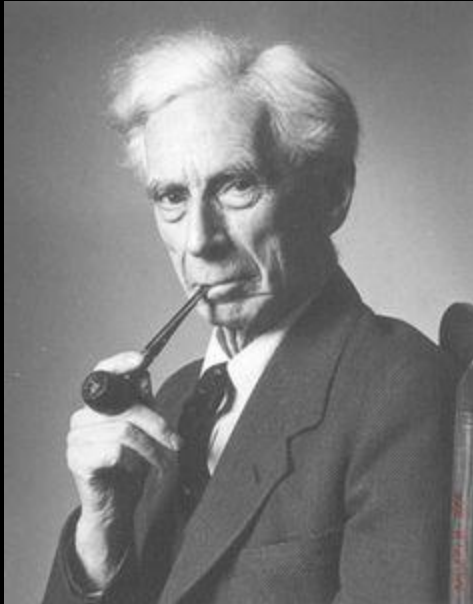






# Emissions Reduction Current Strategies

- **Technology** Natural Gas, Nuclear replacing Coal
  - **Cost** Hydrogen, Geothermal, Hydro
  - **Scale** CCUS, DAC, Nature Solutions
  - **Efficiency and Conservation** Solar, Wind, Batteries
  - **Timeframe**
- Markets*
- Governments*



**What is wanted is not the will to believe, but the will to find out, which is the exact opposite.**

***- Bertrand Russell***

**Climate**

ATMOSPHERE



**Land**



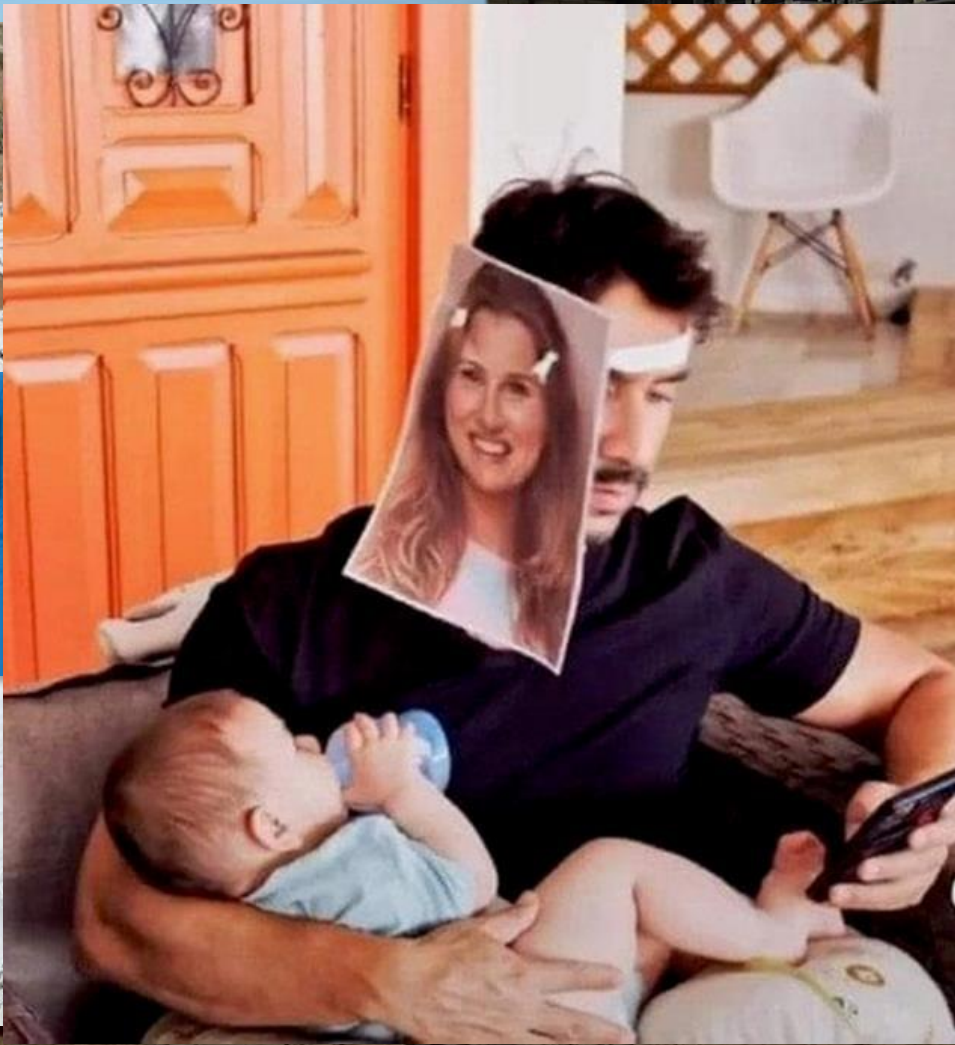
**One System**

**Air**



**Water**





# No one wants to buy used EVs and they're piling up in weed-infested graveyards

by Monica Raymunt and Bloomberg / Dec

22, 2023 / 6:06 AM

MATTHIAS SC

By The E

February 0

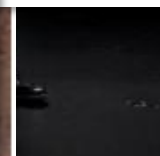


Business Pu

tric

ous shine

0



# Biden's EV Mandate Blows Its Cover

The EPA's new tailpipe emissions rule is a plan to eliminate gas-

Great Resignation | Climate Change | Leadership | Inflation | Ukraine Invasion

COMMENTARY · ENERGY PRICES

## Reducing energy options doesn't work. Just ask Europe—and the U.S. states where gas prices are rising

BY SCOTT TINKER

October 18, 2022 at 4:44 AM CDT

ele

BY: MIKE LEE, JEAN CHEMNICK |  
03/21/2024 06:45 AM EDT

BY: JAMES BIKALES | 10/06/2023 08:46 AM EDT

Williams/Zuma Press)

By *The Editorial Board* [+ Follow](#)

Mar 20, 2024 05:39 p.m. ET



TIME

SUBSCRIBE

# China controls global supply chains for solar, wind, and batteries.

18 MINUTE READ

Aug 27, 2023 - 6.12pm



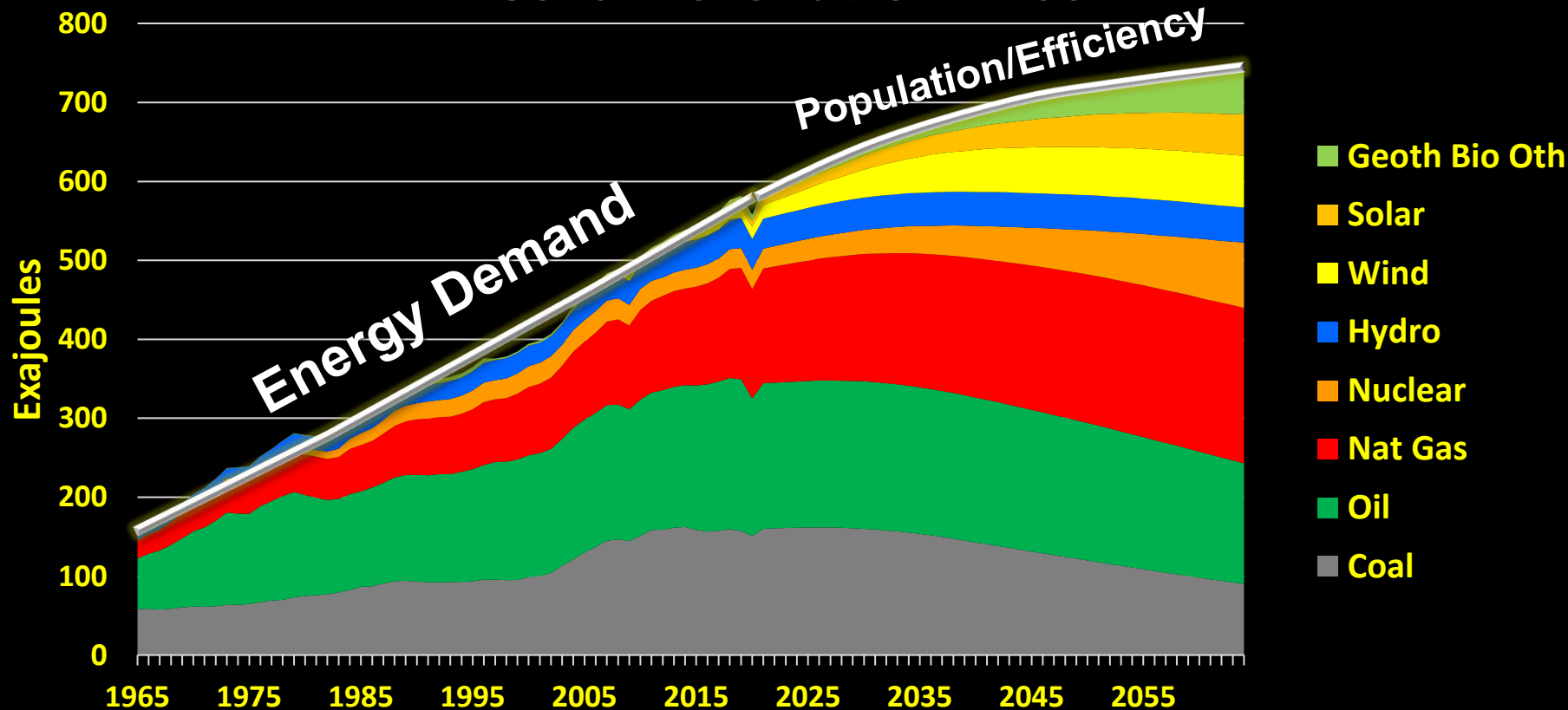
By [Wenxin Fan](#) [Follow](#) and [Sha Hua](#) [Follow](#)

Oct. 20, 2023 at 7:43 am ET

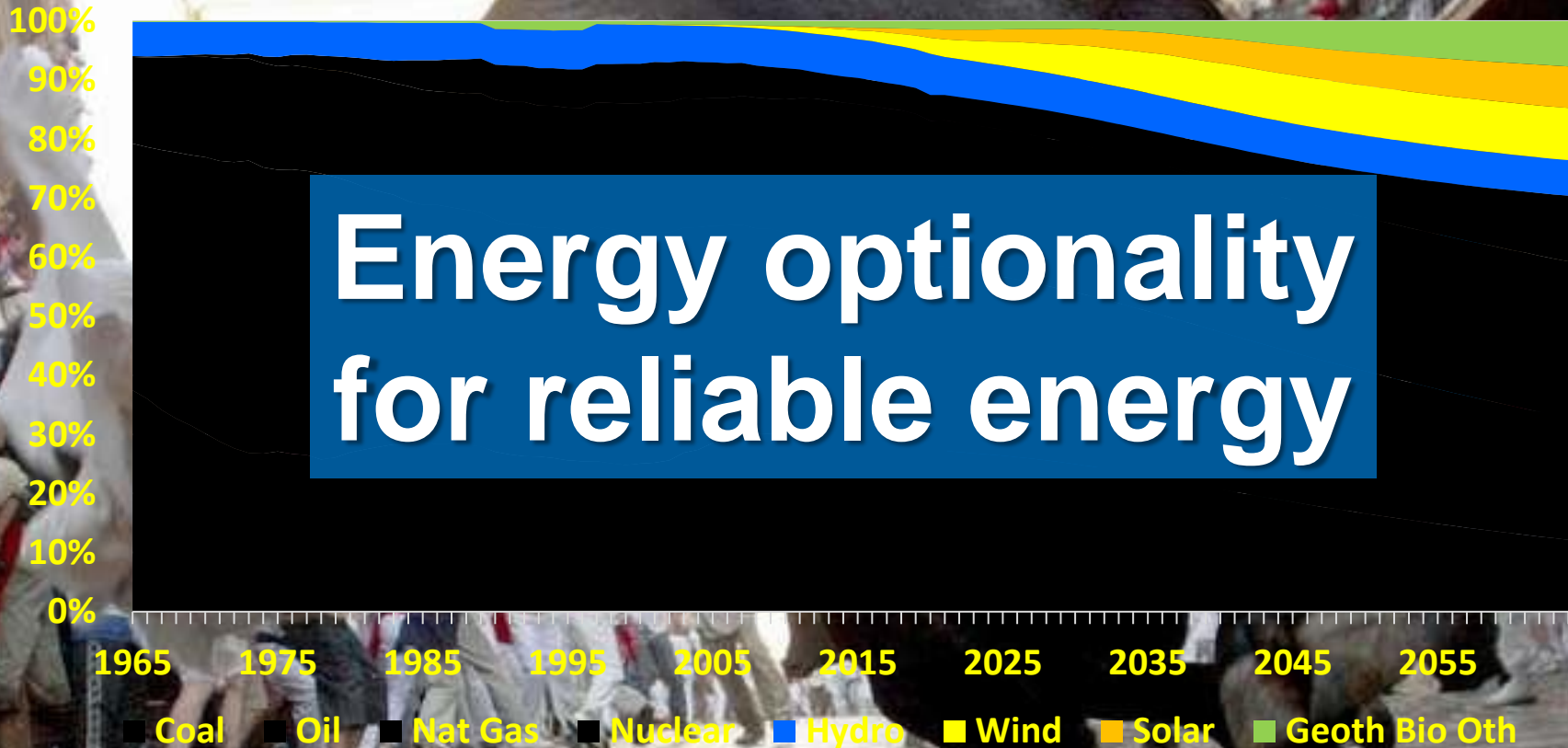


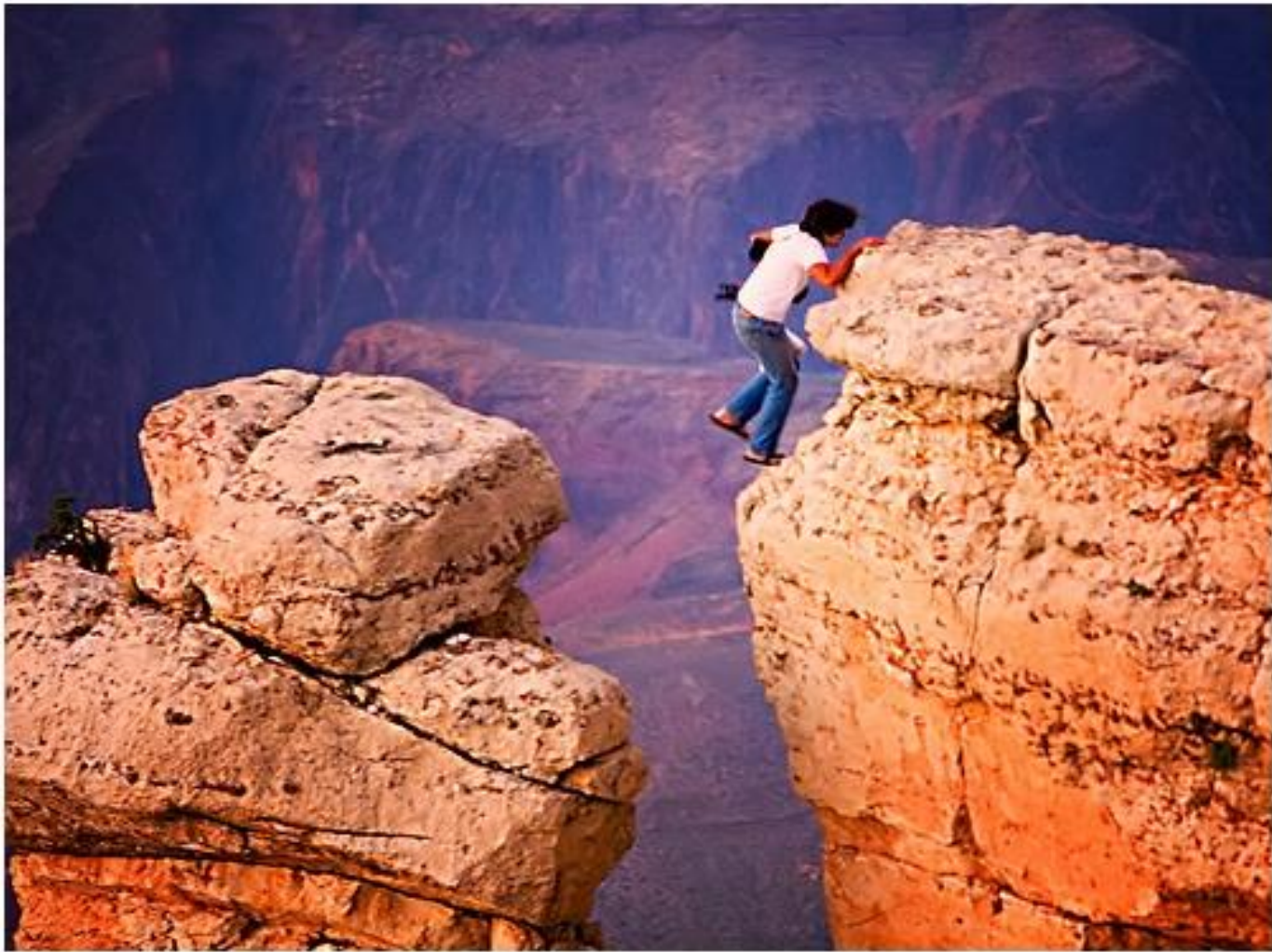
# Annual Primary Energy Consumption

~30% "Renewable" in 2064



# Energy optionality for reliable energy





# “Energy Transition”

## Energy Addition

+

## Emissions Reduction



# Secure energy underpins solutions to global challenges

~ 6% remains

~ 46% of  
global  
energy

**All the ill that is in us  
comes from fear,  
and all the good from love.**

**- Eleanor Farjeon**





The beginning of  
wisdom is to do  
away with fear.

~  
Yohannes Gebregeorgis



Reduce  
Environmental  
Impacts



# Final Musings

- **You can't negotiate with physics**
- **No one has a patent on truth; we just seek it**
- **The binary fear narrative is divisive**
- **Cancel canceling; civil dialog is vital**
- **Make humility cool again**



# Thank You

