



# Energy, Net Zero, and Oil & Gas: Possible Futures

Steve Goreham



# Our Energy Journey Today

Energy and Climate Change

Lessons from Europe

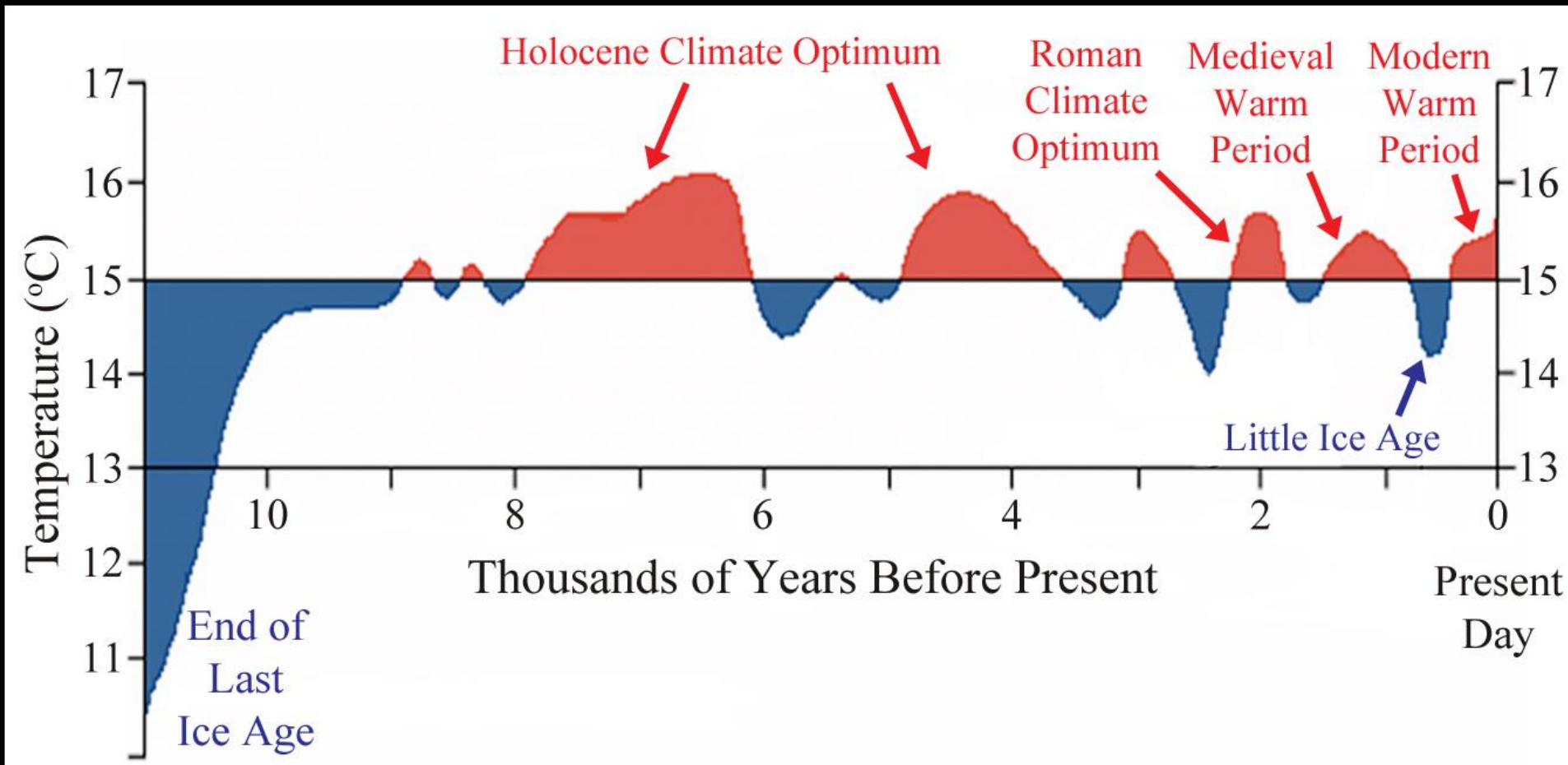
Renewables,  
Net Zero, and  
Electric Vehicles

Possible  
Futures



# Today's Climate is Not Historically Warm

## Ice Core Data from Crete Site in Central Greenland



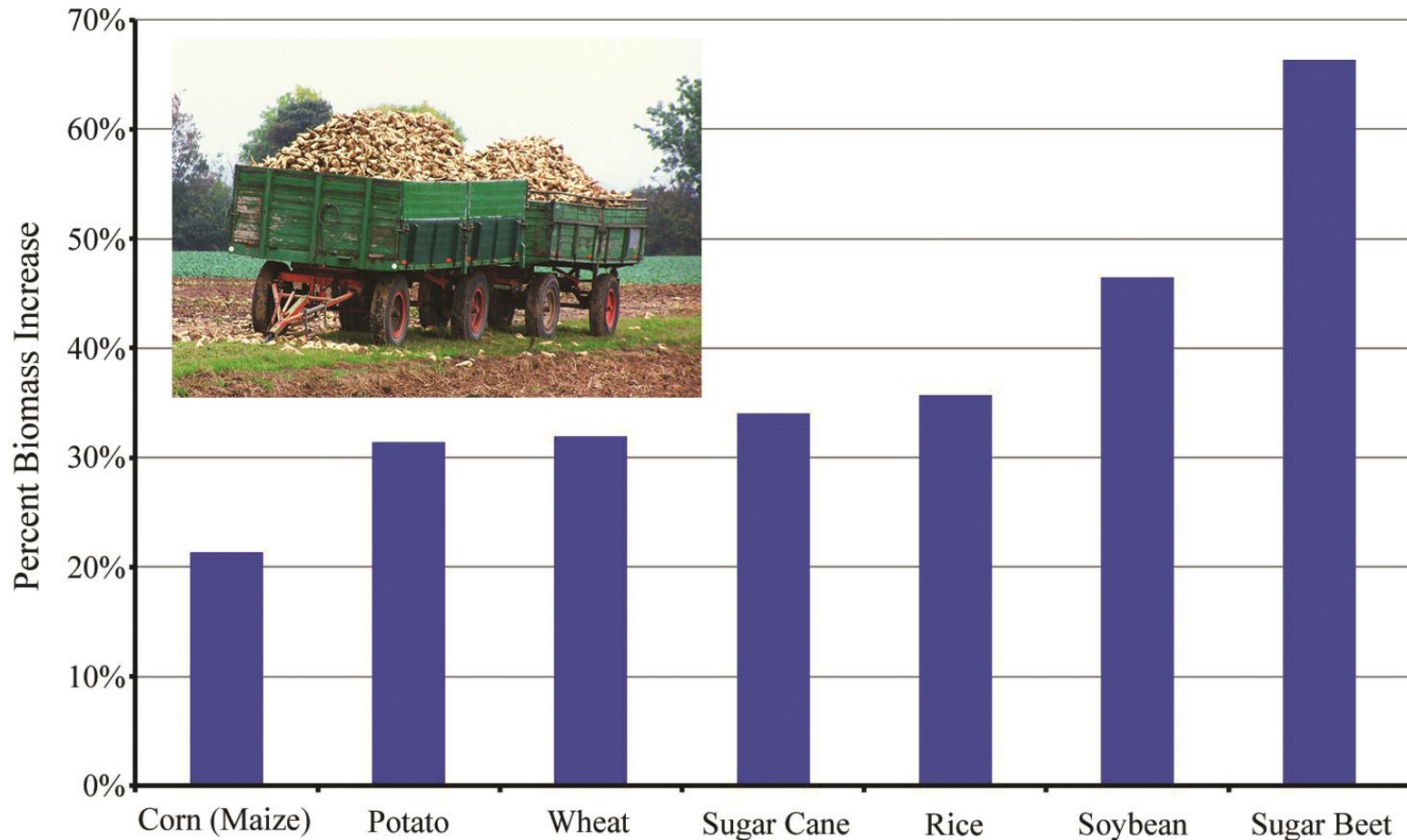
W. Dansgaard (1984), Adapted by Dennis Avery (2009)



# CO<sub>2</sub> is Green!

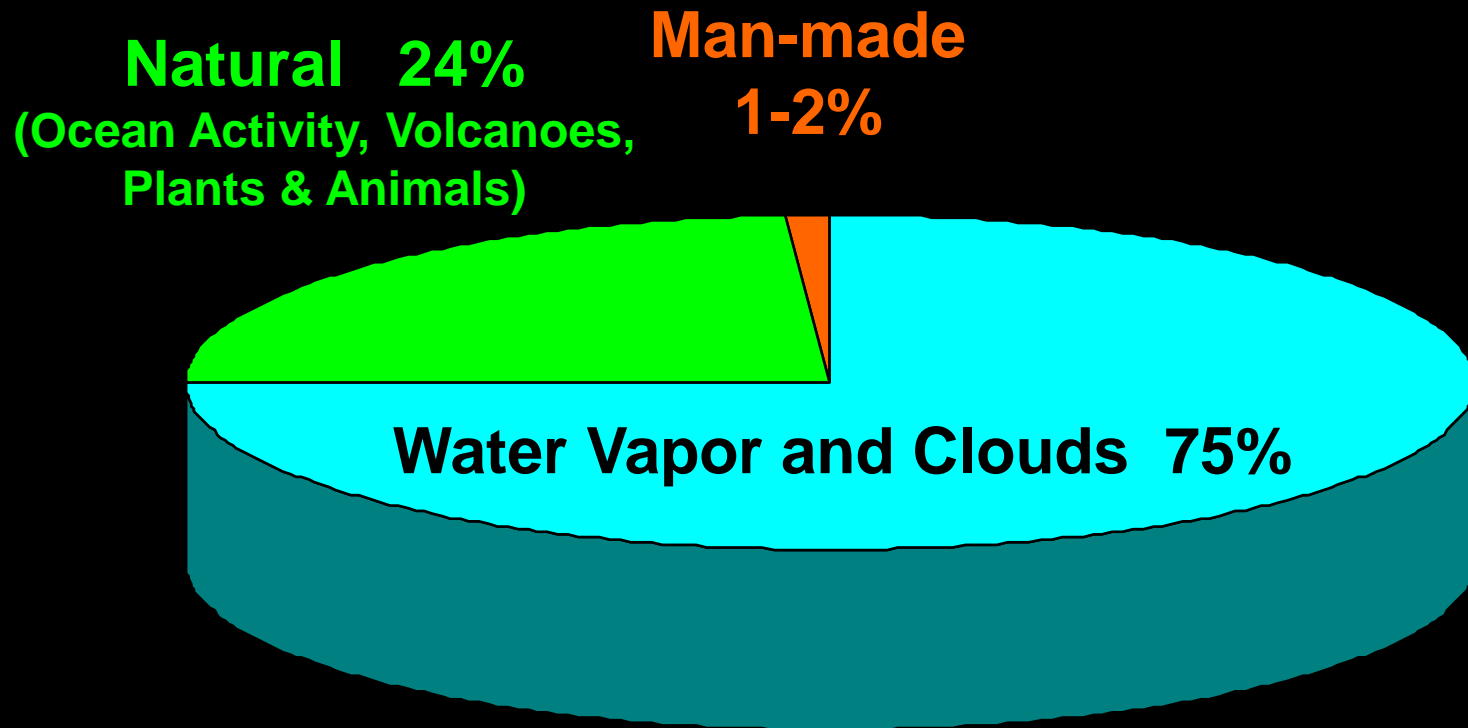
## CO<sub>2</sub> is Plant Food, Essential for Life on Earth

Increased Food Crop Growth from Increased CO<sub>2</sub>  
(Additional 300 ppm Atmospheric CO<sub>2</sub> Concentration)



**Idso  
(2011)**

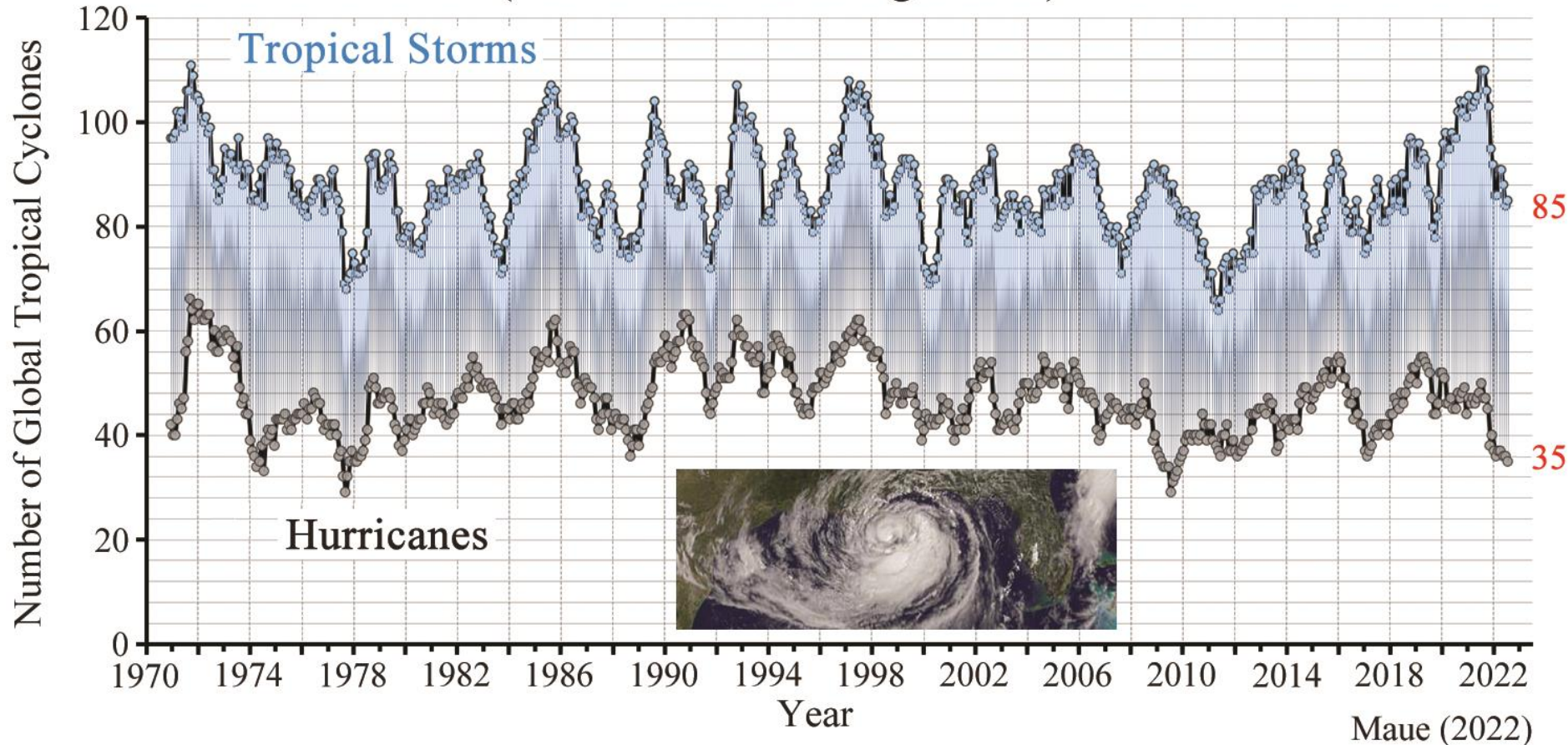
# Human Contribution to Greenhouse Effect



**Mankind Responsible for about 1 or 2 Parts in 100!**

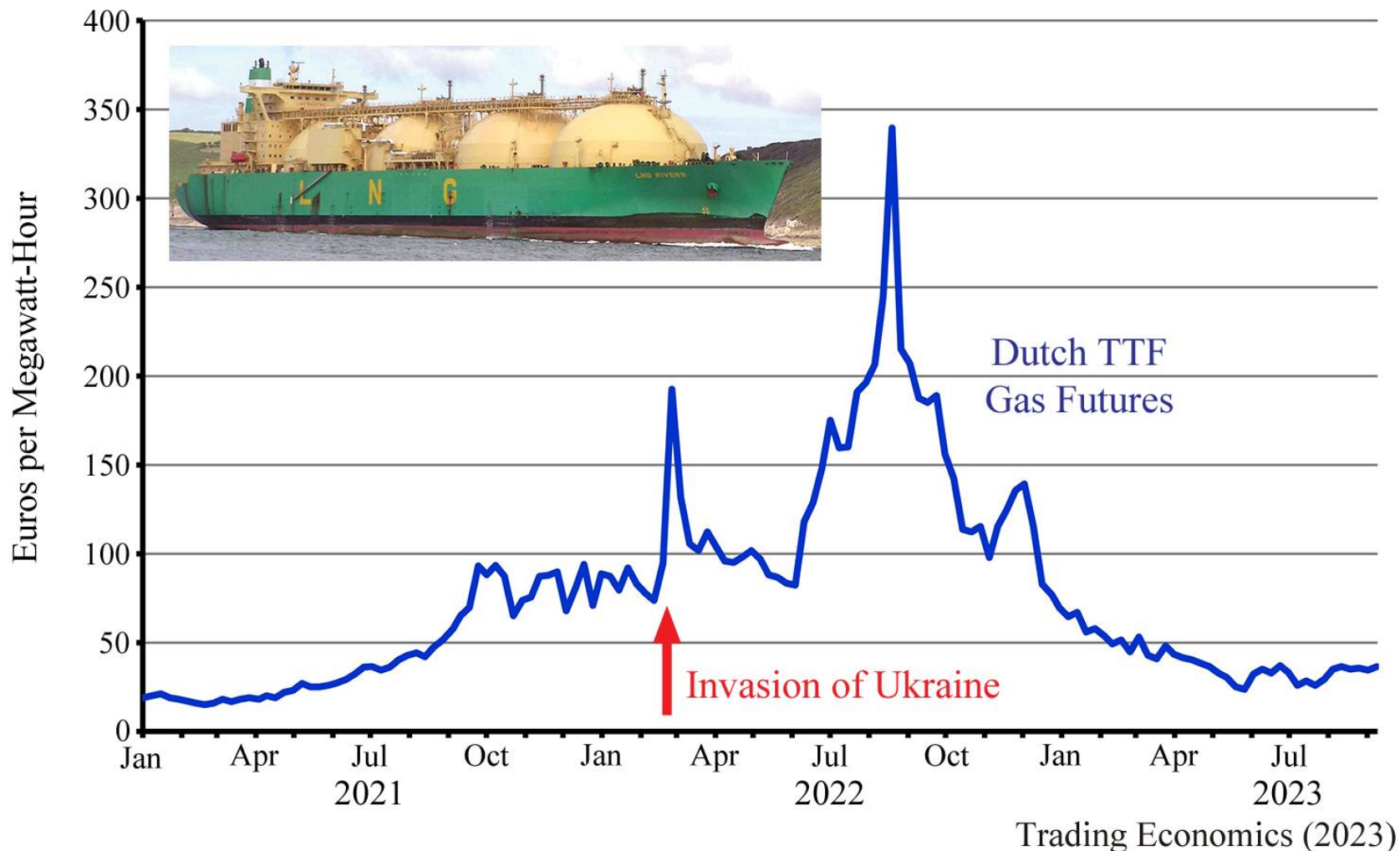
# No Increase in Global Cyclone Frequency Or Intensity

Number of Global Cyclones 1971-2022  
(12-Month Running Sums)



# High Natural Gas Prices

## Europe Natural Gas Prices (2021-2023)

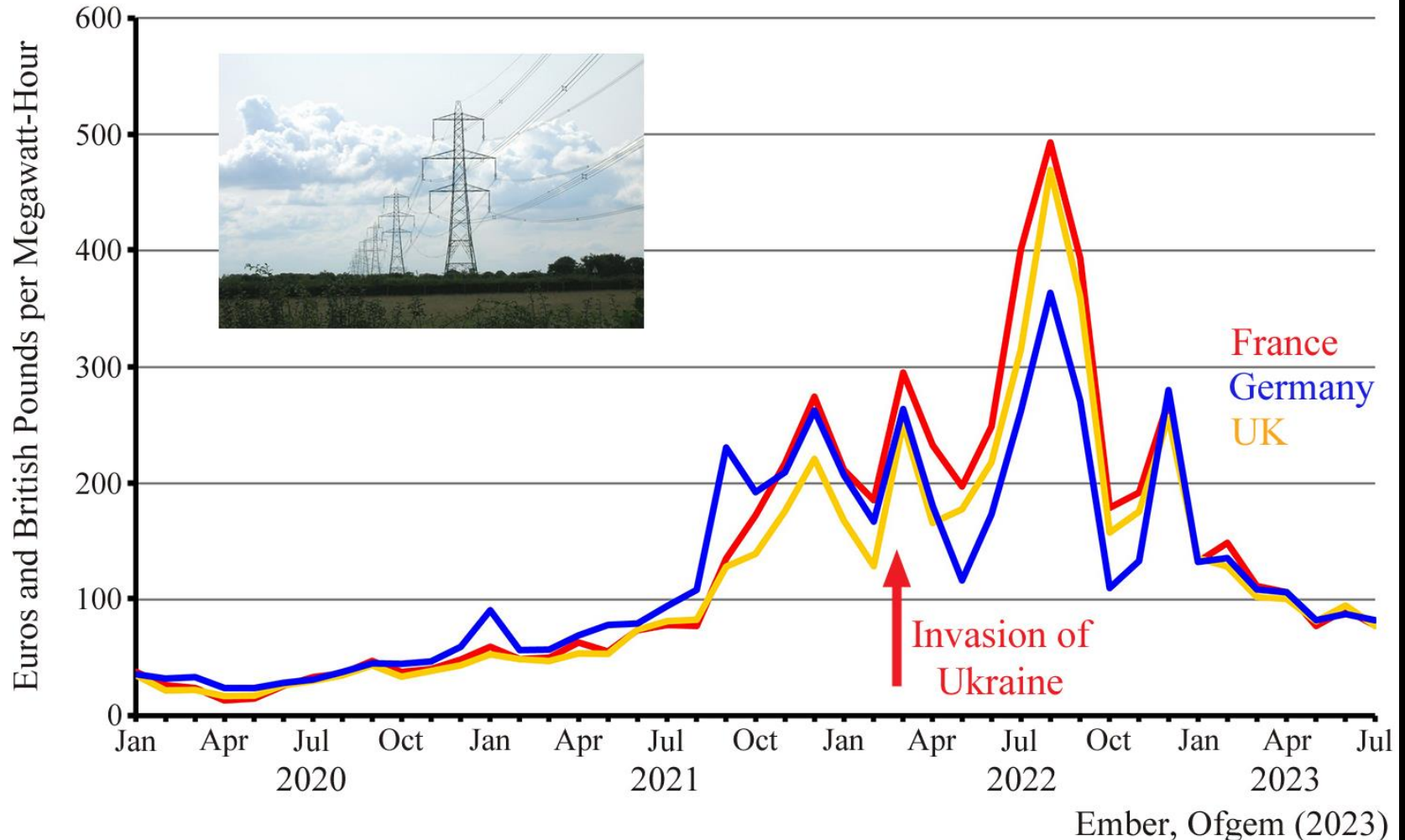


**Prices Still Double Levels of Early 2021**



# High Electricity Prices

France, Germany, UK Monthly Electricity Prices (2020-2023)



**Prices Still 3 Times Higher than in 2020**



# More Environmentally Friendly?

## Average Units of Land (Total Used Footprint)

**Natural Gas 0.8**

**Nuclear 1.0**

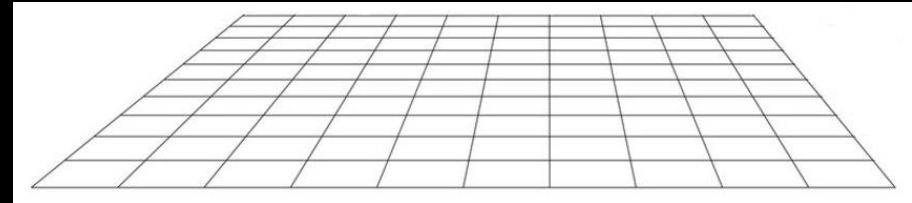
**Coal 1.4**

**Solar 119**

**Wind 33-835**

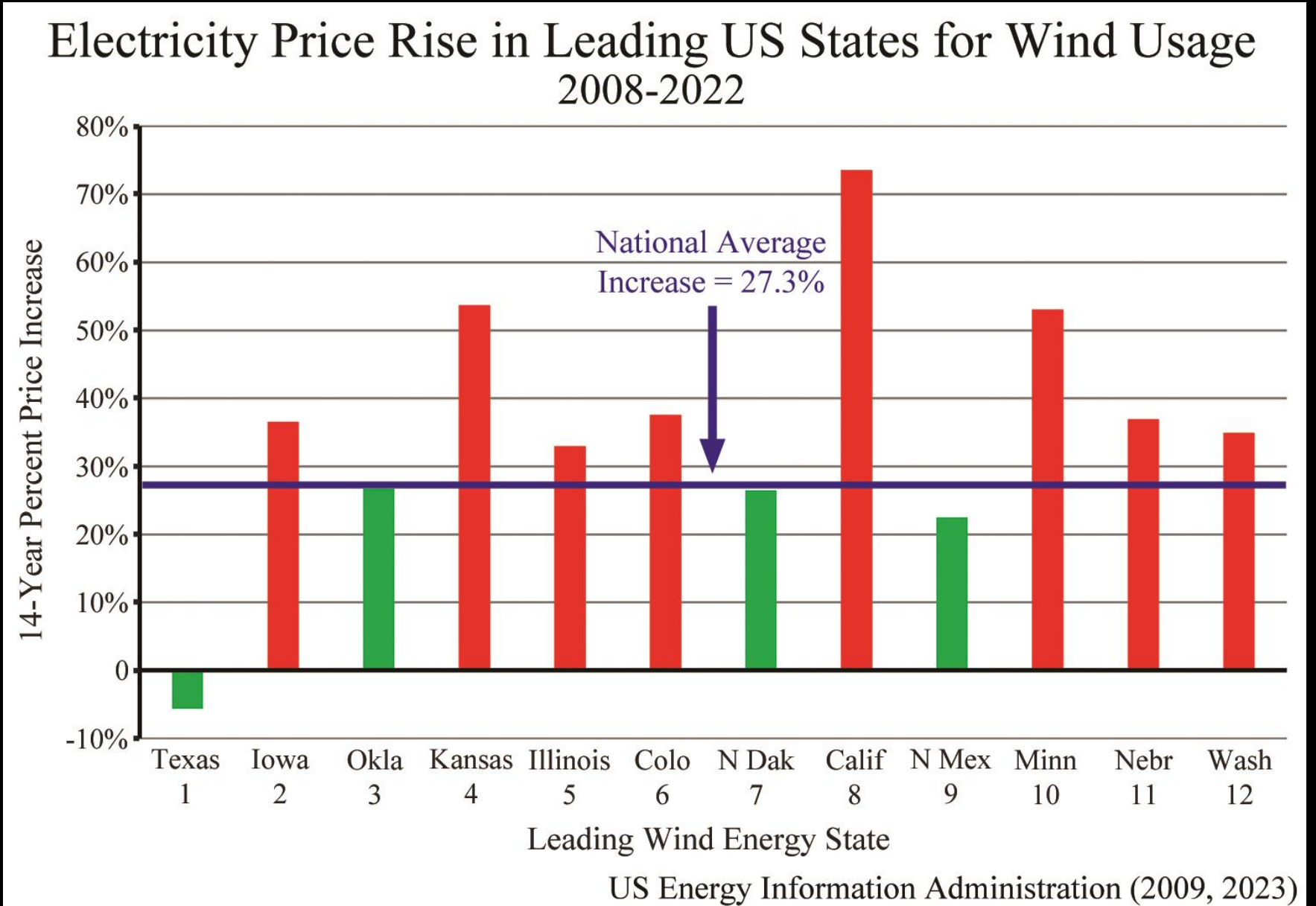
**Biomass 1,518**

Smil (2016)



**Whitelee Wind Array  
Scotland, UK**

# Power Prices Increasing Faster in Wind States



# “Electrification” — Forced Adoption of Electricity from Renewables

Elimination of  
Natural Gas and  
Propane Heating Fuels



Electric Vehicles

# Renewables and Electricity Blackouts

## California

**Wide Area Rolling Blackouts  
August, 2020**



**August 2020 Blackouts (Bloomberg)**

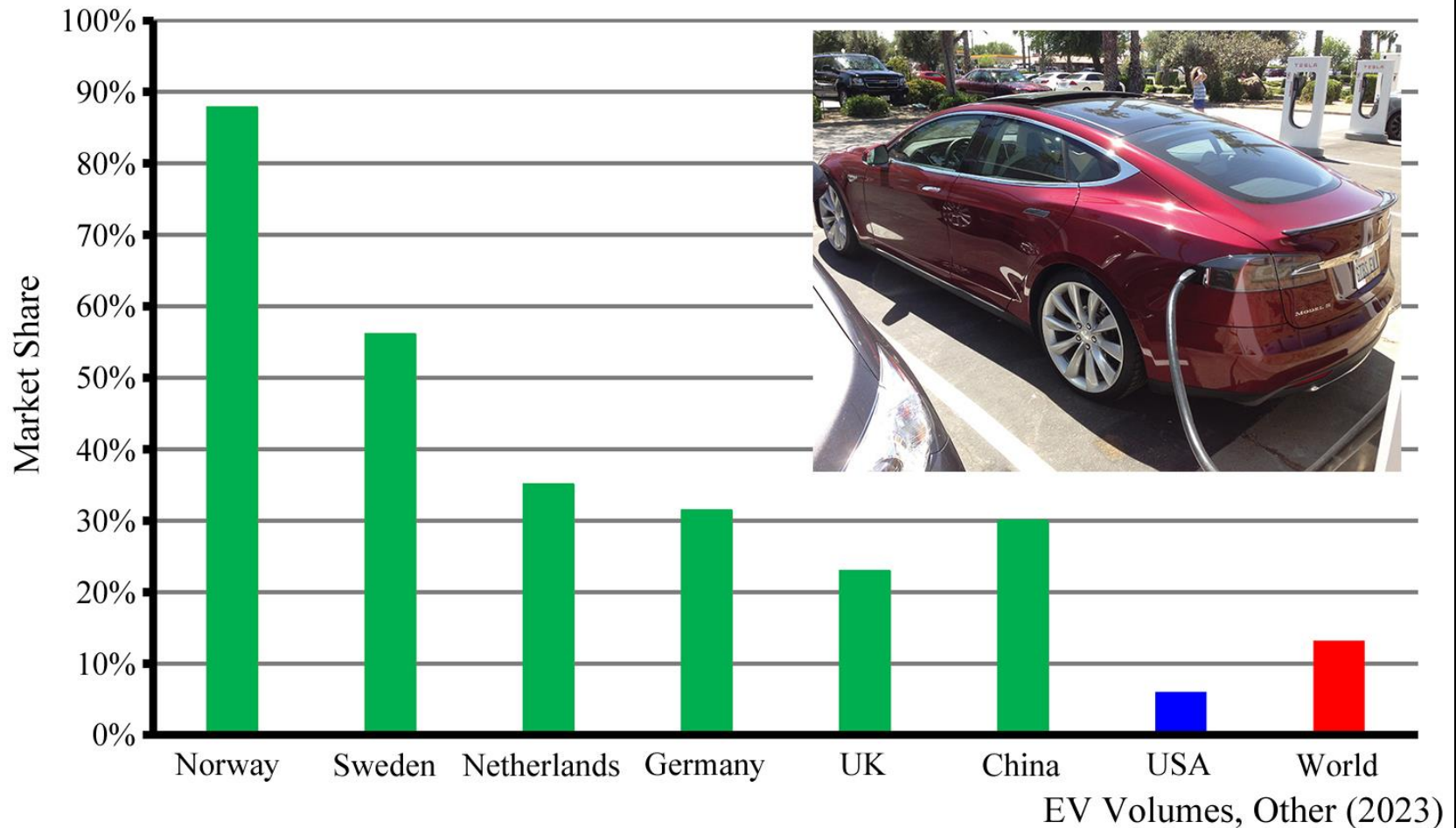
**Texas and Oklahoma  
Lethal Blackouts  
February, 2021**





# World: Growing EV Market Penetration

Electric Vehicle Share of 2022 New Light Vehicle Sales



**Global: 27 Million EVs of 1.5 Billion Light Vehicles**

# Pickup EVs Are Heavy



**2023 Ford F-150  
SuperCrew  
Gasoline  
4,677 lb.**



**“Four tons of ‘em”**



**2023 Ford F-150  
Lightning EV  
About 6,500 lb.**



**2023 Rivian  
R1T EV  
7,148 lb.**



**2024 Chevy  
Silverado EV  
8,532 lb.**

# Europe's Retreat from Green Energy

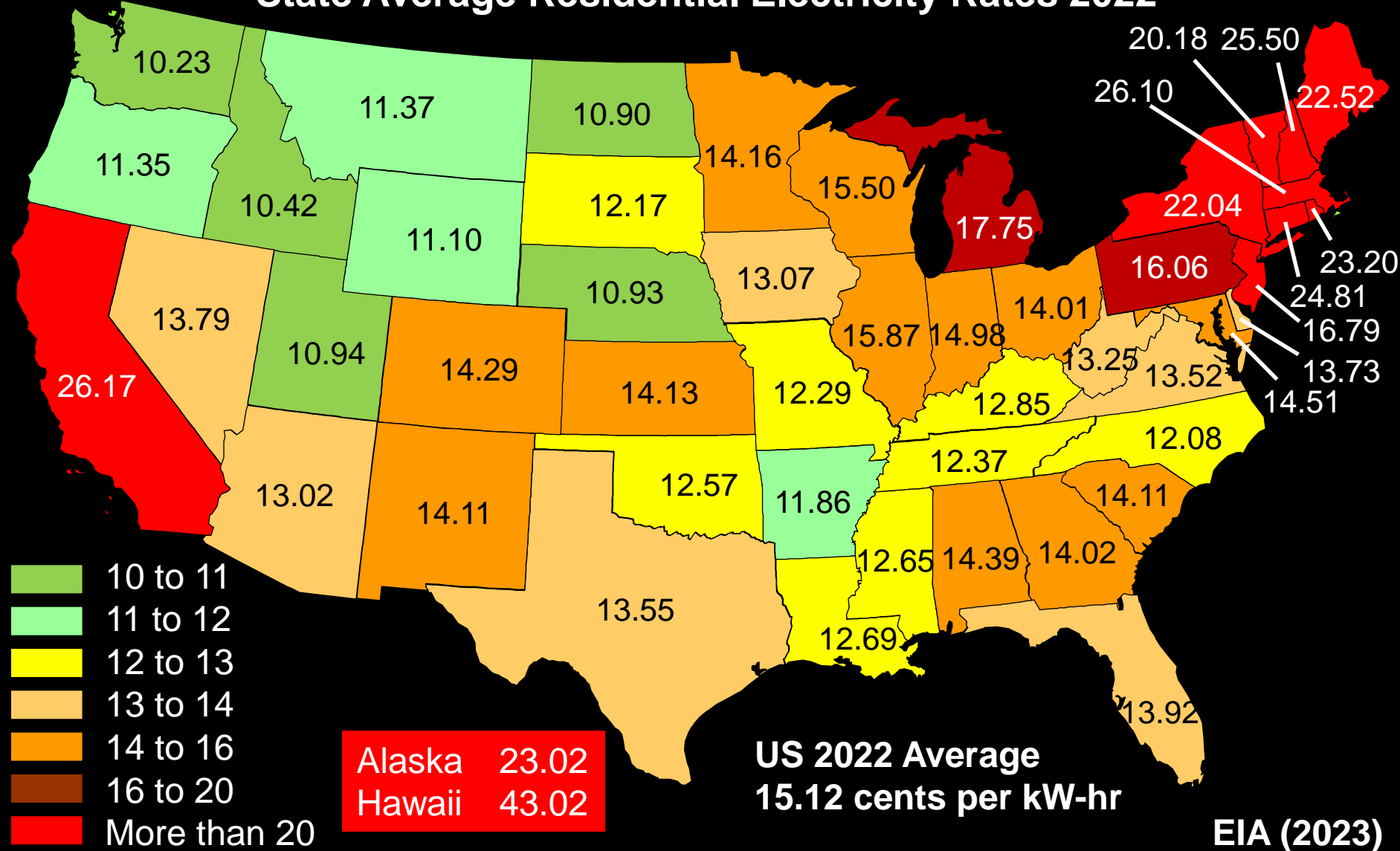
- **Coal Output Up 20 Percent 2021-2022**
  - **Germany Restarted 27 Coal-Fired Plants**
- **Plans Announced to Increase Gas Production**
- **25 LNG Terminals on Order or Under Construction**



**Floating  
LNG Terminal,  
Germany**

# Grid Under Pressure: Rising Electricity Prices

State Average Residential Electricity Rates 2022





# The Coming Green Breakdown

## Green Energy Means:

- Higher Energy Prices
- Electricity Blackouts
- Limited Stove and Car Choices
- Transnational Energy Shocks

**People Will Demand a  
Return to  
Low-Cost, Reliable Energy**



## **GREEN BREAKDOWN**

The Coming  
Renewable Energy Failure

**STEVE GOREHAM**

Foreword by Mark P. Mills

# Takeaways — Implications for Oil & Gas

- Continued Domination by Petroleum Fuels
- Shared Hydrocarbon/Renewable Future
- EV Risk: 20% of Vehicles by 2050?



# Recommendations

- **Stop Selling Guns to the Enemy**
  - Don't Fund Environmental Groups
- **Let's Get the Language Right**
  - Not "Carbon," but "Carbon Dioxide"
- **Don't Call Natural Gas "Renewable"**



**Forget Green Energy,  
Carbon Credits, and  
Counting Emissions,  
Unless Required by Law**

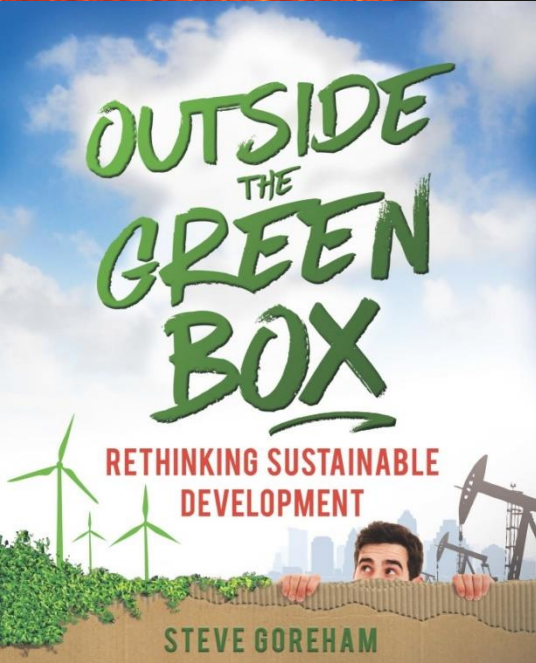




# Climatism!

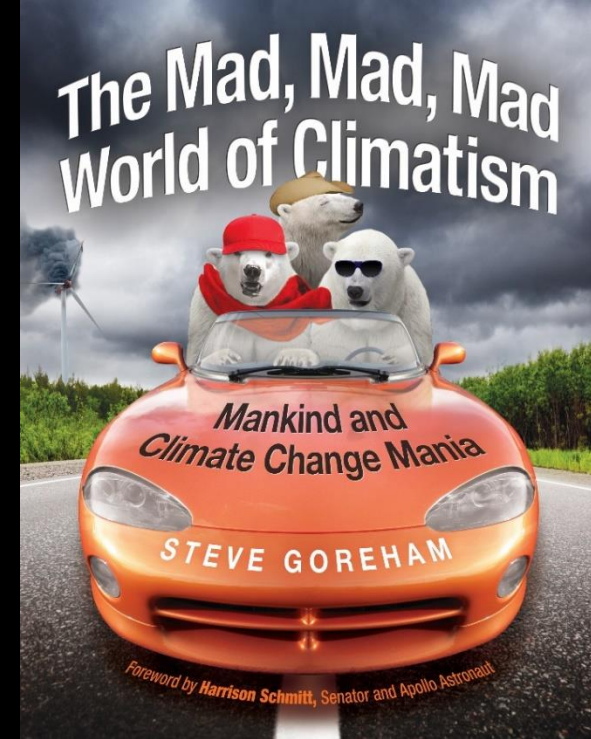
Science, Common Sense,  
and the 21st Century's  
Hottest Topic

Steve Goreham  
Foreword by John Coleman, Meteorologist



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