



Spacefaring Institute™
Charting America's path spaceward!™

America's Only
Practicable Sustainable
Energy Source to "Go Clean"

Space Solar Power-Generated
Astroelectricity

James Michael Snead
Professional Engineer
President

www.SpacefaringInstitute.net

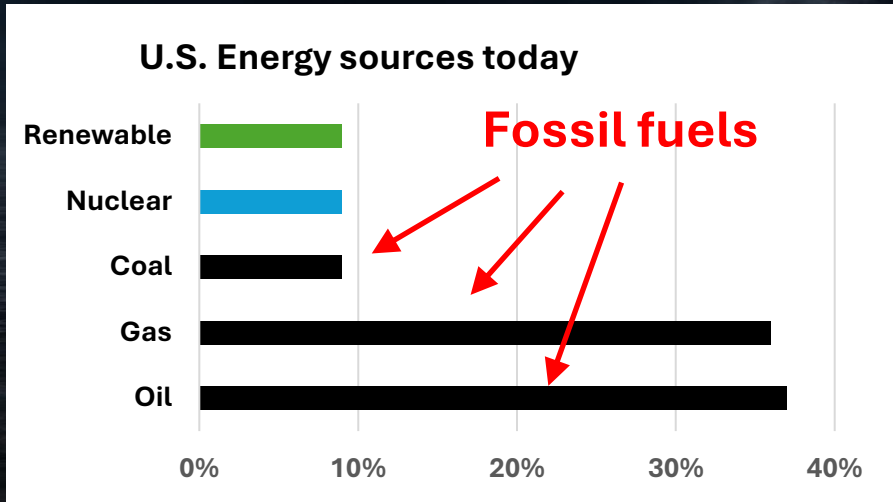
SpacefaringInstitute@gmail.com

Follow the Spacefaring Institute
on LinkedIn

See "Assessment of U.S. Sustainable Energy
Needs & Transition Options — Summary &
Conclusions" at [researchgate.net/profile/](https://researchgate.net/profile/Mike-Snead/research)
[Mike-Snead/research](https://researchgate.net/profile/Mike-Snead/research)

Public distribution permitted

In 2025, America used nearly 17 billion barrels of oil equivalent (BOE) of energy of which **80 percent was non-renewable fossil fuels**



To “go clean”, **America will need to replace 13 billion BOE of fossil fuels with new renewable energy sources**

Achieving this requires building **NEW** renewable electricity generation capacity **equal to nearly 2,200 2-GW Hoover Dams running continuously** — totaling over 4,400 GW of new generation capacity

**With the
transition to
sustainable
energy,
electricity will
replace fossil
fuels as the
primary source
of energy . . .**



**but the new sustainable energy
infrastructure must also supply
clean carbon-based:**

- **Fuels & lubricants**
- **Industrial feedstocks (e.g.,
plastics)**
- **Asphalt**



How will this be done?

CO₂ extracted from the atmosphere and captured from smokestacks will be combined with clean hydrogen to produce **clean carbon fuels and feedstocks — all sustainably done with **NO NET CO₂ ADDITION TO THE ATMOSPHERE****

Today's oil refineries will be repurposed to produce **clean carbon fuels and feedstocks**

Engineers call this a “Win – Win” solution

Regular 9.19 $\frac{9}{10}$

Plus 9.39 $\frac{9}{10}$

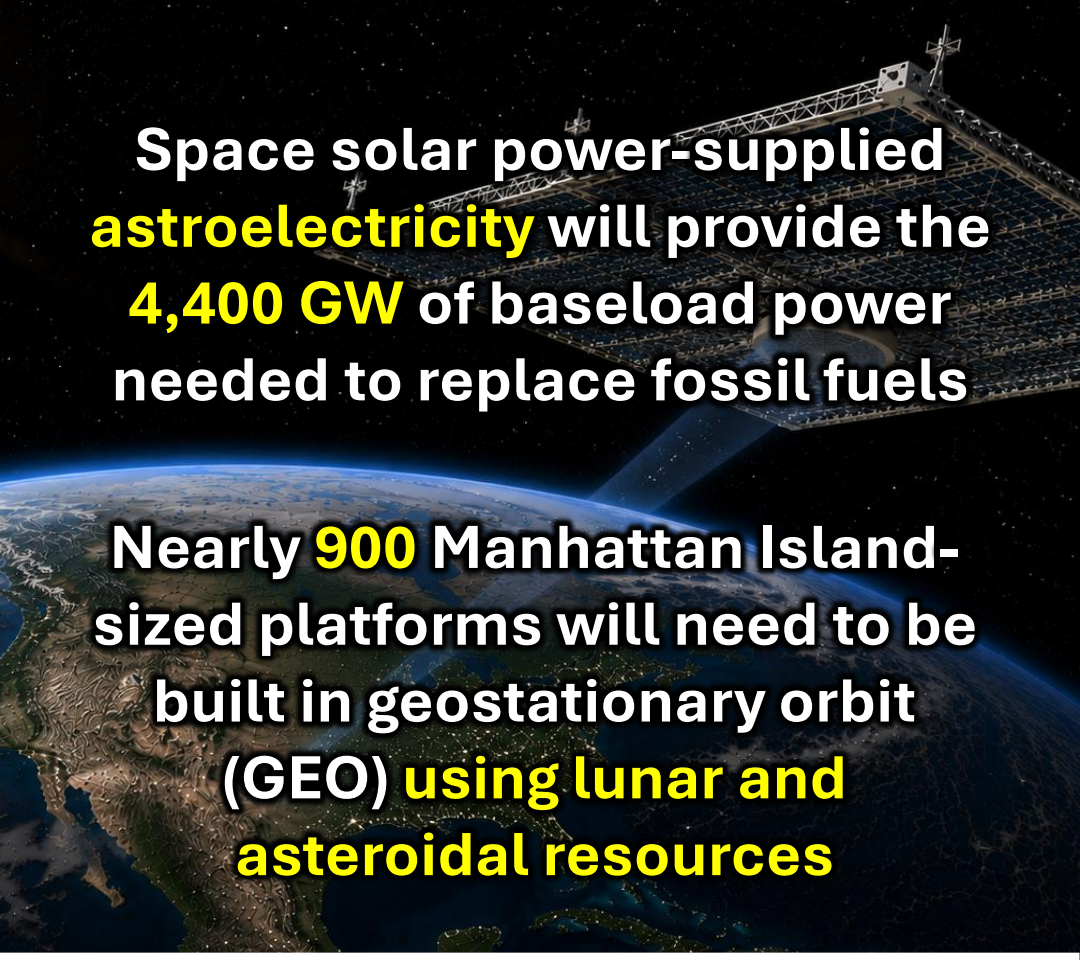
Premium 9.59 $\frac{9}{10}$

LIMIT 5
GALLONS

Why can't
starting this
transition **just**
wait for better
times?

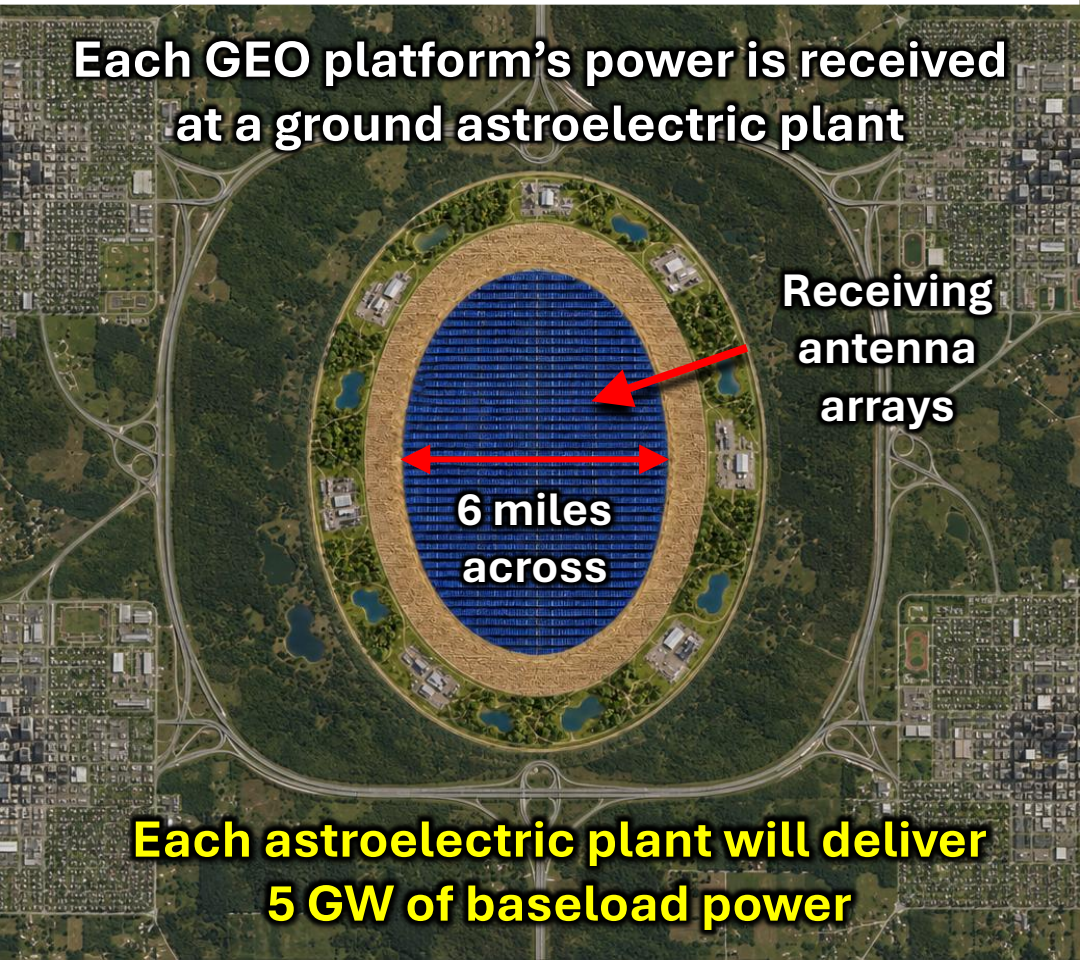
Waiting until fossil fuel
shortages begin will
cause:

- Severe energy price-driven inflation
- Rationing
- Economic disruption
- Reduced prosperity
- Energy insecurity
- Political instability
- Forever wars



Space solar power-supplied **astroelectricity** will provide the **4,400 GW** of baseload power needed to replace fossil fuels

Nearly **900** Manhattan Island-sized platforms will need to be built in geostationary orbit (GEO) **using lunar and asteroidal resources**



Each GEO platform's power is received at a ground astroelectric plant

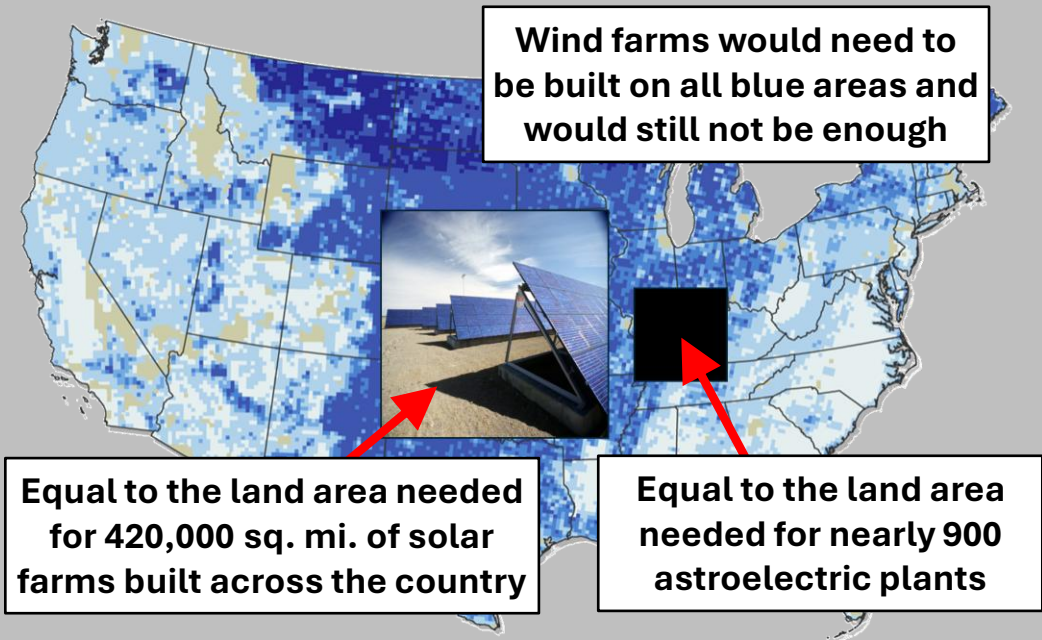
Receiving antenna arrays

6 miles across

Each astroelectric plant will deliver **5 GW** of baseload power

Why is ASTROELECTRICITY the only PRACTICABLE solution?

Comparison of the land use for wind farms, solar farms, and astroelectric plants



Covering the U.S. with over 7 million wind turbines still would NOT meet America's energy needs



The 420,000 sq. mi. of solar farms needed would use much of America's farmland to meet America's energy needs



Over 5,000 nuclear power plants would need over 5,000 tons of plutonium or U-233 to be "bred" each year

**This transition will not
be simple or quick . . .**

**America's ORDERLY transition
to PRACTICABLE renewable
energy will take DECADES TO
ACCOMPLISH . . .**

**and astroelectricity supplies must
begin by the time American
fracked oil and natural gas
production peaks to keep
America energy secure!**

**We must ACT NOW to protect our
children and grandchildren's
future energy security!**

