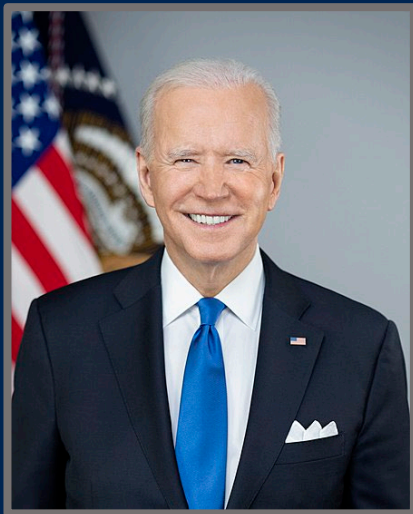
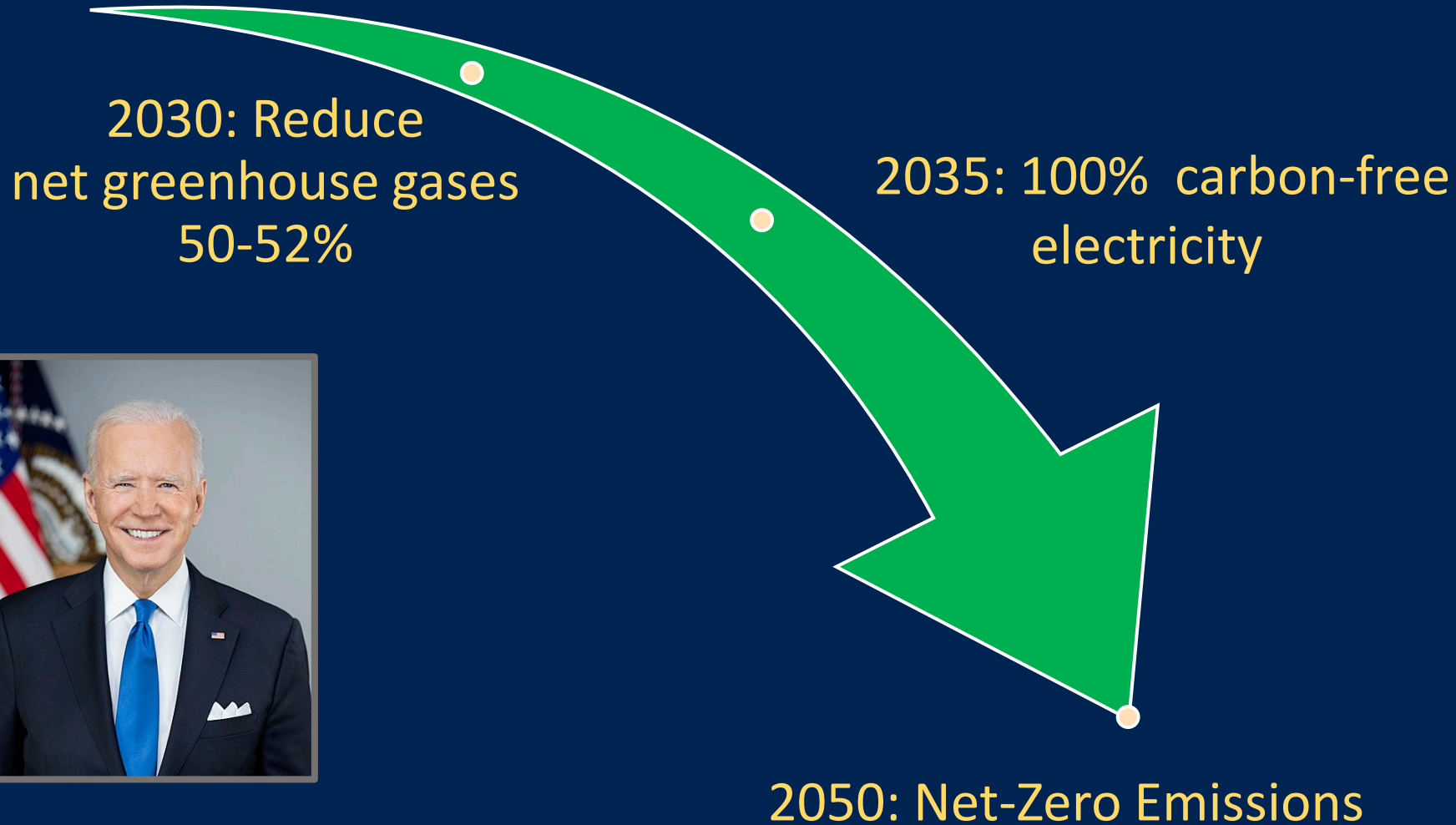


The Urgent Need for Science and  
Innovation to Save this Warming Planet

Climate Change: Time is running out.....



# The Administration's Climate and Energy Goals



President Biden



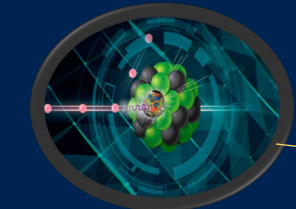
Secretary Granholtz

# Office of the Undersecretary for Science & Innovation

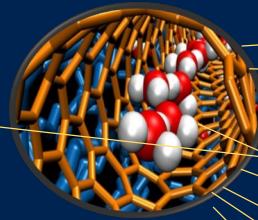
## Office of Science

## Applied Energy

### Connecting the Dots: Breaking down Silos



Nuclear Physics



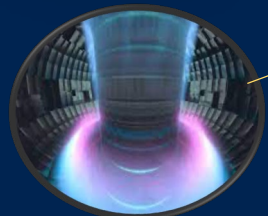
Basic Energy Sciences



High Energy Physics



Biological & Environmental Sciences



Fusion Energy Sciences



Advanced Scientific Computational Research



Wind



Carbon Management



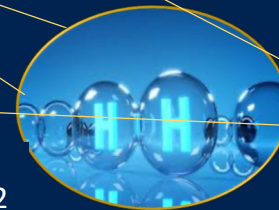
Storage



Nuclear & Fusion



Critical Minerals & Materials



H<sub>2</sub>



E-Grid



Solar



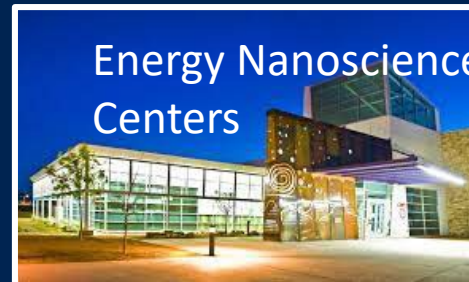
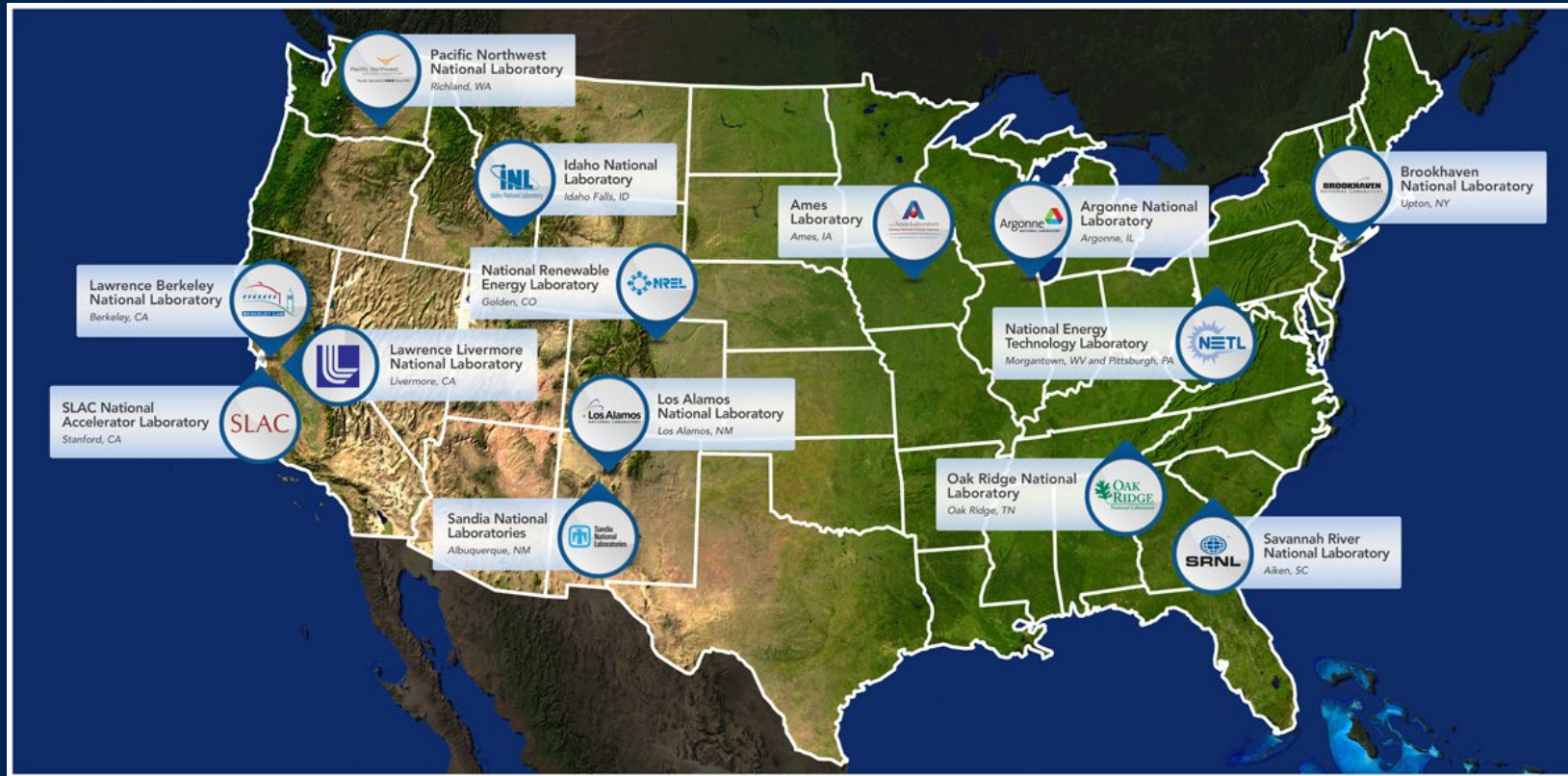
Transportation



AI

# 17 DOE National Laboratories Powerhouses of Energy Solutions

28 User Facilities  
> 30,000 users/year

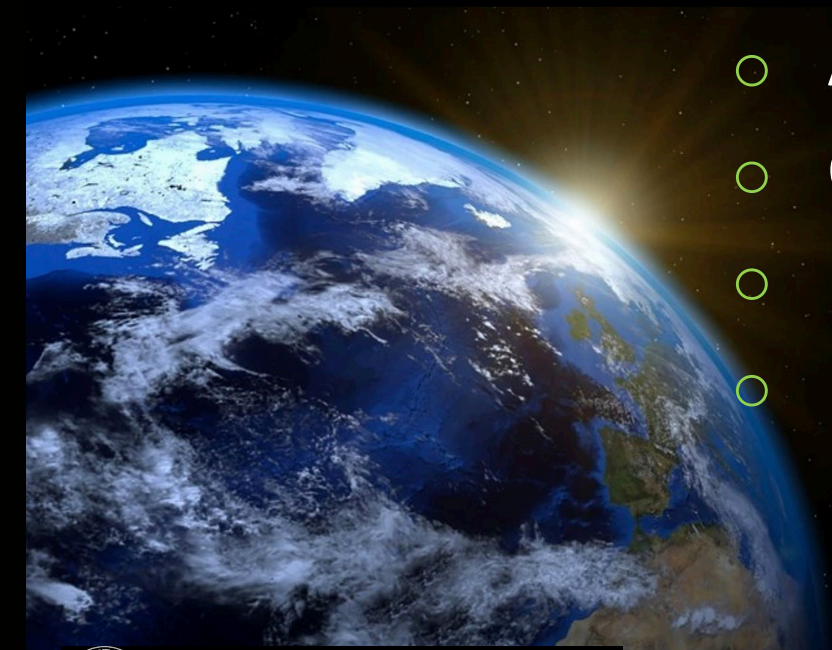


# Energy Earthshots: Necessary and Urgent

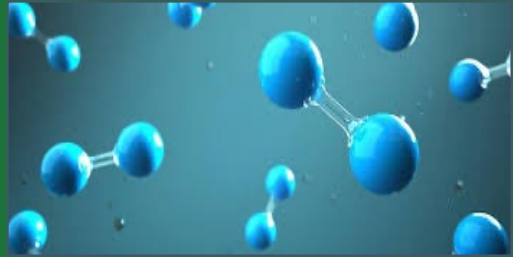
Target the remaining major RD&D breakthroughs to be achieved in the next decade to reach our 2050 net-zero carbon goals.

## Energy Earthshots will:

- Advance the reduction of greenhouse gas emissions
- Overcome a difficult-to-solve remaining technology barrier
- Demonstrate global leadership
- Engage stakeholder groups



# The Current Energy Earthshots and Goals



## Hydrogen

*1 Dollar for  
1 Kilogram in  
1 Decade*



## Long Duration Storage

*90% cost reduction from 2020  
+10 hours of storage in  
1 Decade*



## Carbon Negative

*< \$100 for  
10+ Hours of Storage in  
1 Decade*

# Additional Cross Cutting Efforts

Critical Minerals and Materials

Subsurface Energy Innovation

Grid Modernization

Fusion Energy

Clean Energy Technology Manufacturing

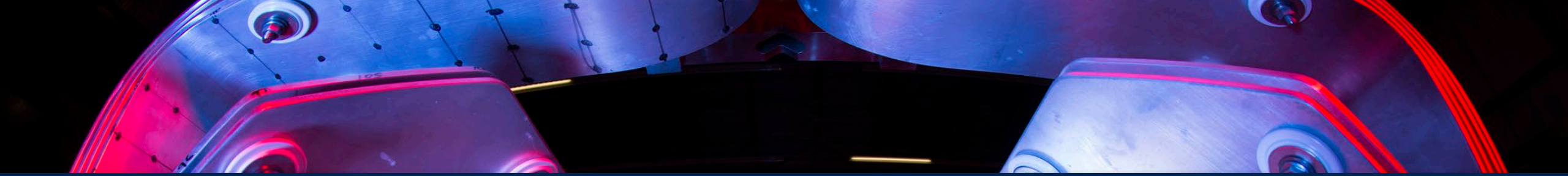
Industrial Decarbonization

For more details:

2015: DOE Quadrennial Technology Review







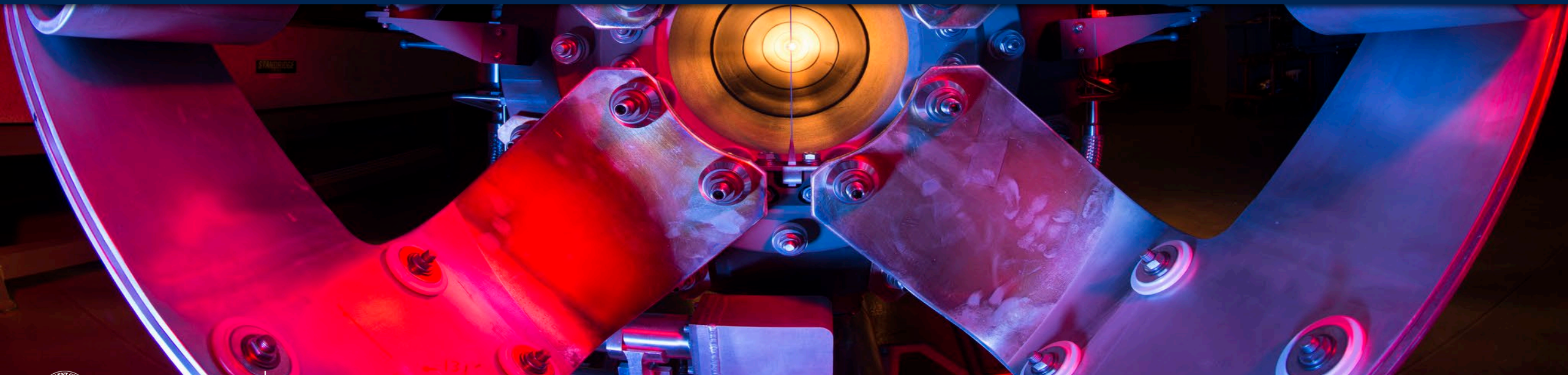
# Research Security Policies



U.S. DEPARTMENT OF  
**ENERGY**

Office of  
Science

Office of Laboratory Policy  
March 2022



U.S. DEPARTMENT OF  
**ENERGY**

*Office of the Undersecretary for Science & Innovation*

# DOE funding from the Bipartisan Infrastructure Law (BIL)

The BIL provides \$62 billion for DOE to deliver a more equitable clean energy future by

- Investing in American manufacturing and workers.
- Expanding access to energy efficiency and clean energy for families, communities and businesses.
- Delivering reliable, clean, and affordable power to more Americans.
- Building the technologies of tomorrow through clean energy demonstrations.



Leaving no one  
or no community  
behind.



When you hear President Biden say he wants to build a better America, he means-  
A more equitable America. A more inclusive America. And a more just America.  
And we'll build it with Clean Energy.”

*DOE Secretary Jennifer Granholm*



And leaving no one and  
no talents behind in  
building and sustaining  
our  
Energy Workforce.

# Inclusion & Diversity

# PARTNERSHIPS ARE NECESSARY AND WELCOME FOR SUCCESS





All hands on  
deck for  
Clean  
Energy  
for all... and  
by all.

<https://www.energy.gov>



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