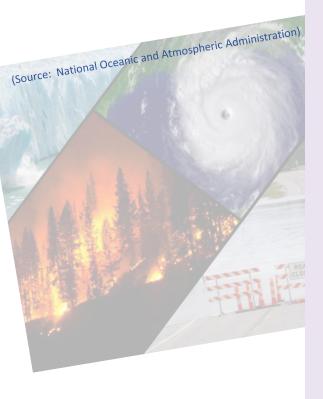
# Symposium on the Global Security and the Energy Transition

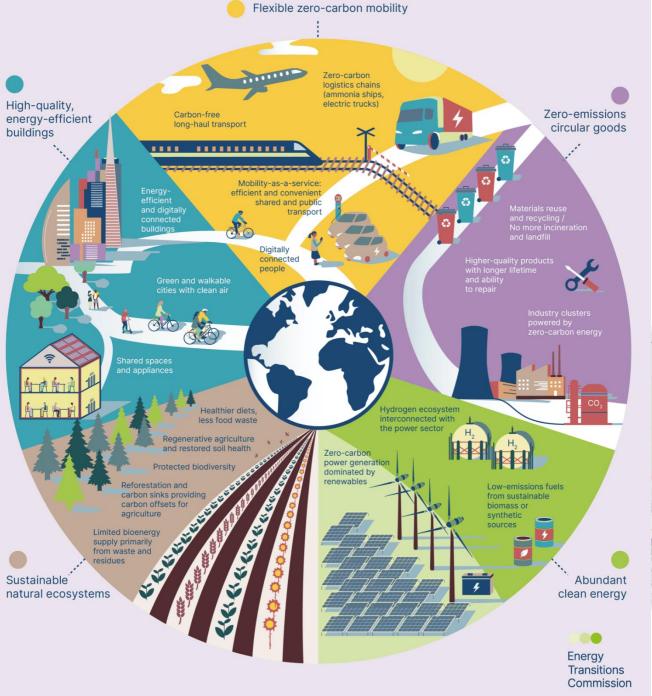
#### **Tokyo University**

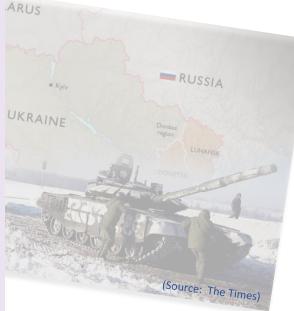
#### **Jane Nakano**

Senior Fellow Energy Security and Climate Change Program jnakano@csis.org

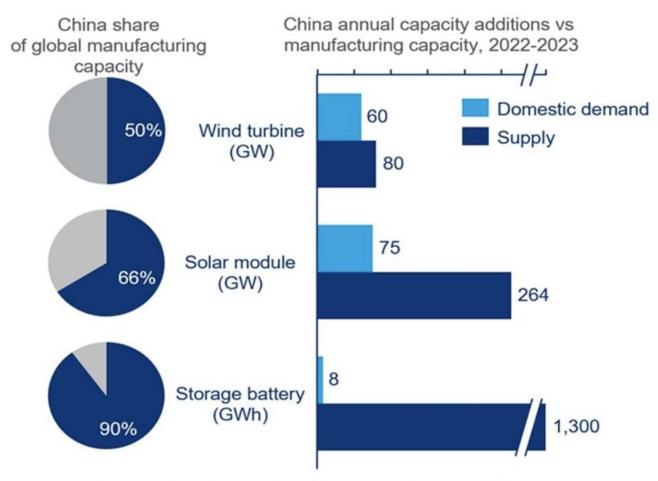








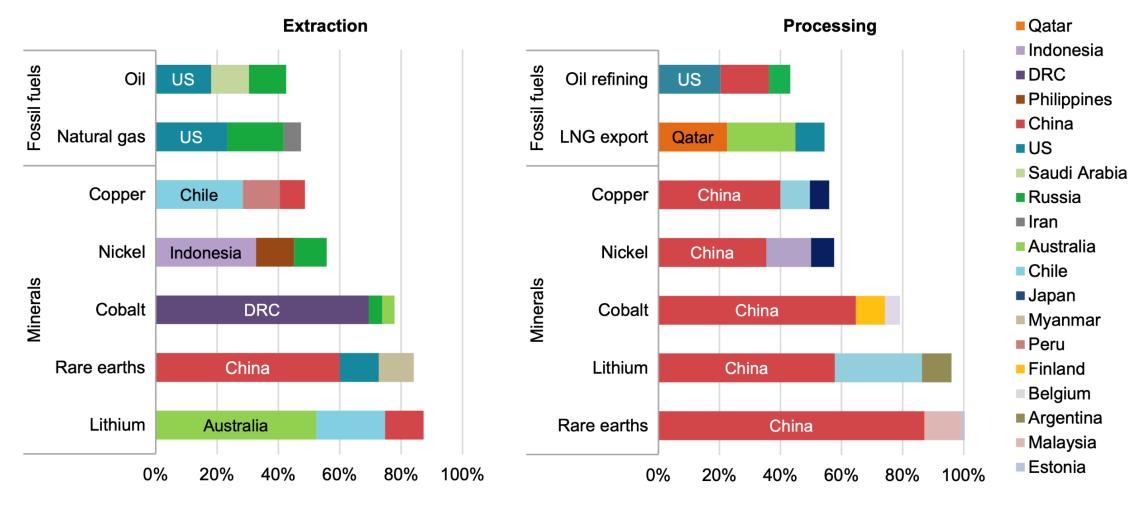
# China's Share in the Global Manufacturing of Clean Energy Technologies



Note: more than 90% of the battery capacity will be used in the EV market

Source: Wood Mackenzie APAC Power & Renewables Service

#### Share of top three producing countries in production of selected minerals and fossil fuels, 2019



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Notes: LNG = liquefied natural gas; US = United States. The values for copper processing are for refining operations. Sources: IEA (2020a); USGS (2021), World Bureau of Metal Statistics (2020); Adamas Intelligence (2020).

BUILDING RESILIENT SUPPLY CHAINS, REVITALIZING AMERICAN MANUFACTURING, AND FOSTERING BROAD-BASED GROWTH

100-Day Reviews under Executive Order 14017

June 2021

A Report by
The White House

Including Reviews by
Department of Commerce
Department of Energy
Department of Defense
Department of Health and Human Services



# A FUTURE MADE IN A M E R I C A



### **Energy-related appropriations under the Bipartisan Infrastructure Law**

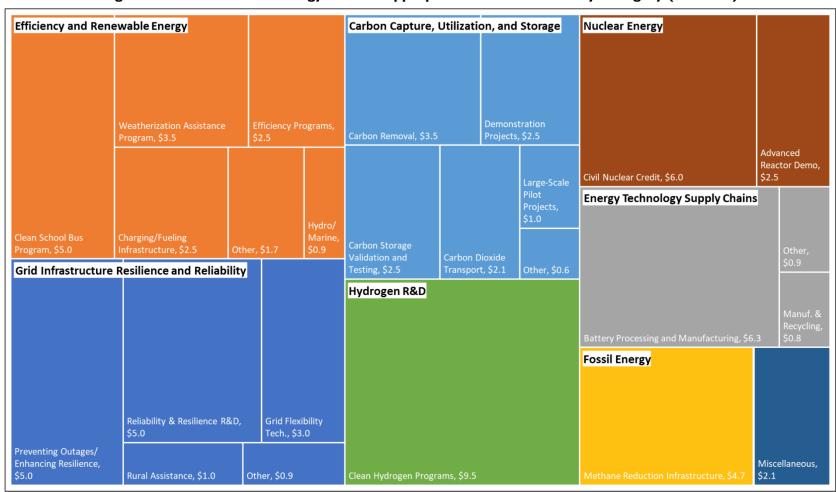
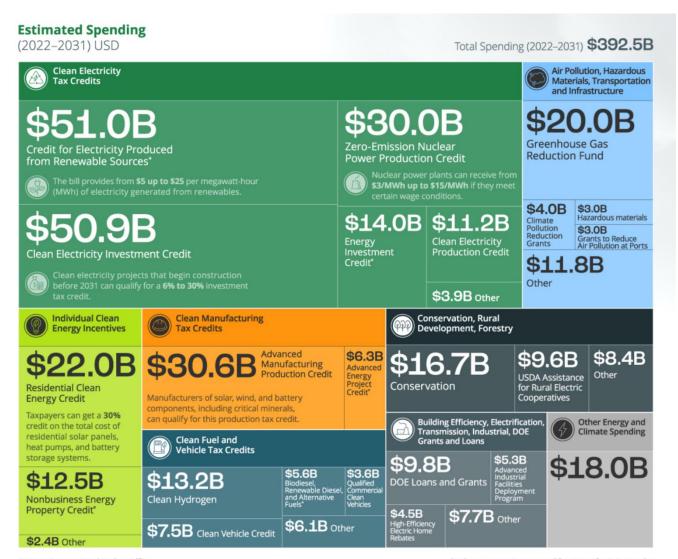


Figure 1. FY2022-FY2026 Energy-Related Appropriations in P.L. I 17-58 by Category (\$ billions)

Source: CRS analysis of P.L. 117-58.

**Notes:** Excludes \$11.293 billion for the AML Reclamation Fund and \$6.42 billion for the DOT Carbon Reduction Program, which may fund non-energy projects. R&D denotes research and development. Manuf. denotes manufacturing.

# **Clean Energy Funding in the Inflation Reduction Act**



Source: Congressional Budget Office

\*Indicates extensions or modifications of existing credits





#### THE GREEN DEAL INDUSTRIAL PLAN

Speeding up the contribution of Europe's innovative clean tech industries to net-zero

February 2023

With the Green Deal Industrial Plan, the Commission will promote the creation of a more with the **Green Deal Industrial Plan**, the Commission will promote the creation of a more supportive environment for deploying the clean tech manufacturing capacity required to meet Europe's ambitious green targets.

#### The Green Deal Make Europe the first

climate-neutral continent

by 2050

The Green Deal Industrial Plan

Build the industrial capacity for the clean technologies that make up the Green Deal

#### REPowerEU

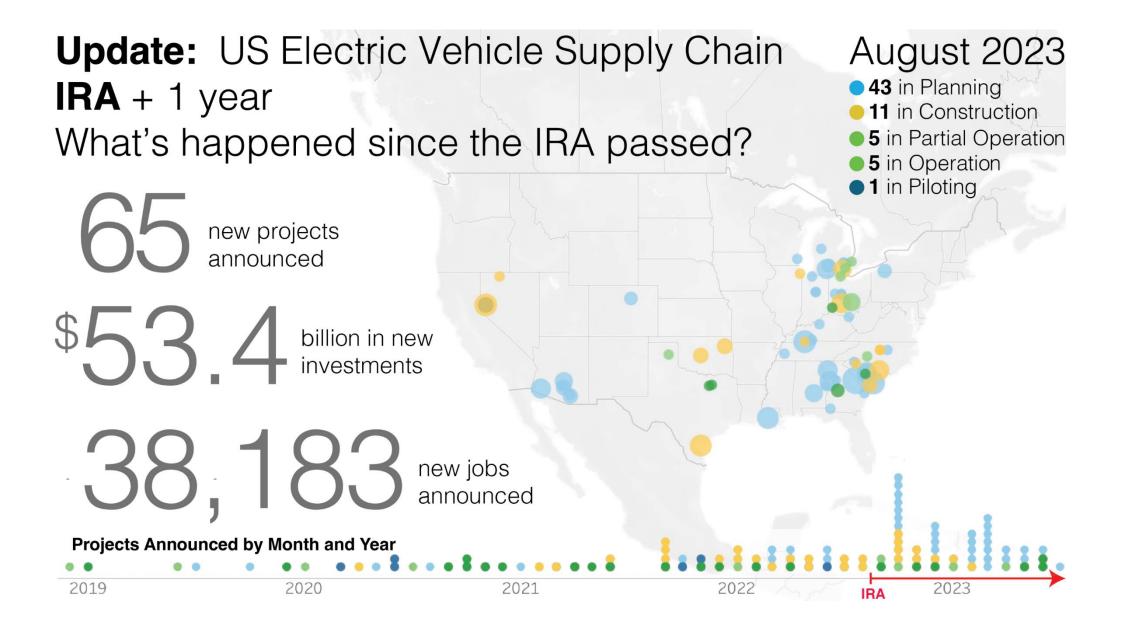
Respond to energy market disruption with affordable, secure and sustainable energy for Europe

The Recovery and Resilience Facility

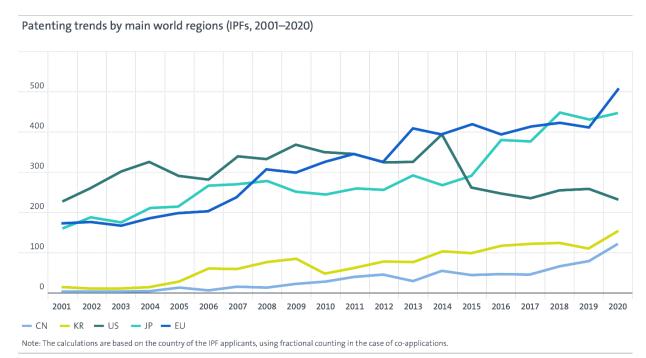
Recover from the pandemic better prepared for the green and digital transitions



(Source: EURACTIV)



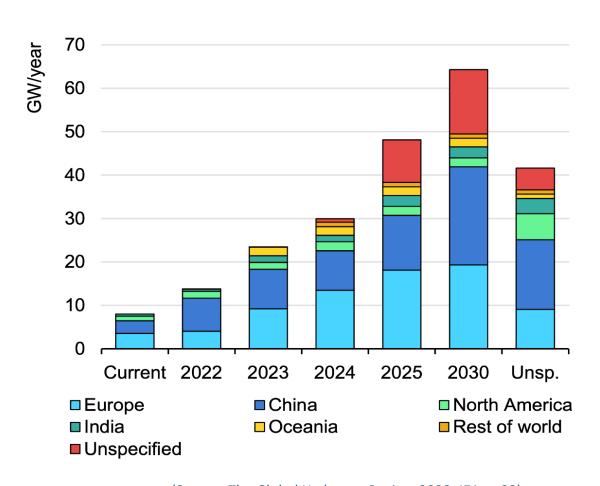
# Hydrogen-related Patenting Trends by 5 Key Regions (2001-2020)



Source: author's calculations

(Source: Hydrogen Patents for a Clean Energy Future, IEA, 2023, p.13)

#### **Global Electrolyzer Manufacturing Capacity**



(Source: The Global Hydrogen Review 2022, IEA, p.80)