The US plan to become the world’s cleantech superpower



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In a huge hangar in Quonset Point, Rhode Island, welders are aiming blazing torches at sheets of aluminum. The hulls of three new ships, each about 27 meters long, are taking shape. The first will hit the water sometime in the spring, ferrying workers to service wind turbines off the New England coast.

The US barely has an offshore wind sector for these vessels to service. But as the Biden administration accelerates a plan to decarbonize its power generation sector, turbines will sprout

along its coastline, creating demand for services in shipyards and manufacturing hubs from Brownsville, Texas, to Albany, New York.

Senesco Marine, the shipbuilder in Rhode Island, has almost doubled its workforce in recent months as new orders for hybrid ferries and larger crew transfer vessels have come in. “Everybody tells me recession in America is inevitable,” says Ted Williams, a former US Navy officer who is now the company’s chief executive. “But it’s not happening in shipbuilding.”

Nor is it happening in any clean energy sector in America. Across the country, a new revolution is underway in sectors from solar to nuclear, carbon capture to green hydrogen—and its goals are profound: to rejuvenate the country’s rustbelt, decarbonize the world’s biggest economy, and wrest control of the 21st-century’s energy supply chains from China, the world’s cleantech superpower.

The world is only just beginning to contend with what it means. Less than three years ago, the US had ditched the Paris Agreement on climate change, and then-President Donald Trump was touting an era of American energy dominance based on the country’s fossil fuel abundance. Europeans chided the US for its foot-dragging over climate.

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Since then, President Joe Biden has passed sweeping legislation to reverse course. Last year’s colossal Inflation Reduction Act and its hundreds of billions of dollars in cleantech subsidies are designed to spur private-sector investment and accelerate the country’s decarbonization effort.

“It is truly massive,” says Melissa Lott, director of research at Columbia University’s Center on Global Energy Policy. “It’s industrial policy. It’s the kitchen sink. It’s a strong,

direct, and clear signal about what the US is prioritizing."

The tax incentives have made the US irresistible to investors, say cleantech developers, and are sucking money away from other countries. Since the passage of the IRA last year, $90 billion of capital has already been committed to new projects, according to Climate Power, an advocacy group.

"The US is now the most opportunity-rich, most aggressive growth, most prolific market for renewables investment in the world today," says David Scaysbrook, managing partner of Quinbrook Infrastructure Partners, a global cleantech private equity group. "And will be for quite some time."

And yet it is a gamble for the US, too. The ring of protectionism, and the sheer scale of the state intervention, has alarmed allies—even those who once implored the US to rejoin the global climate fight. France's President Emmanuel Macron says the IRA could "fragment the West." Ursula von der Leyen, the European Commission's president, has complained it would bring "unfair competition" and "close markets."

And the underlying effort to break the dependence on cheap Asian components that have sped the advance of renewables in recent years leaves many analysts skeptical. At a time when the White House is also contending with high inflation and Russian aggression, can the US reset the global energy order, create high-paying cleantech jobs at home, and cut emissions—all at the same time?

"There is simply no reason why the blades for wind turbines cannot be made in Pittsburgh rather than Beijing," Biden said in a speech last April.

"Global arms race for clean energy? Certainly," says Daniel Liu, an analyst at Wood Mackenzie. "But there has to be some level of collaboration, because no country can do it alone."

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