



Prysmian Group 2023 Sustainability Week

“Climate” becomes
“Industrial”. A comparison
between the US IRA and the
EU Green Deal IP & NZIA

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Prysmian
Group

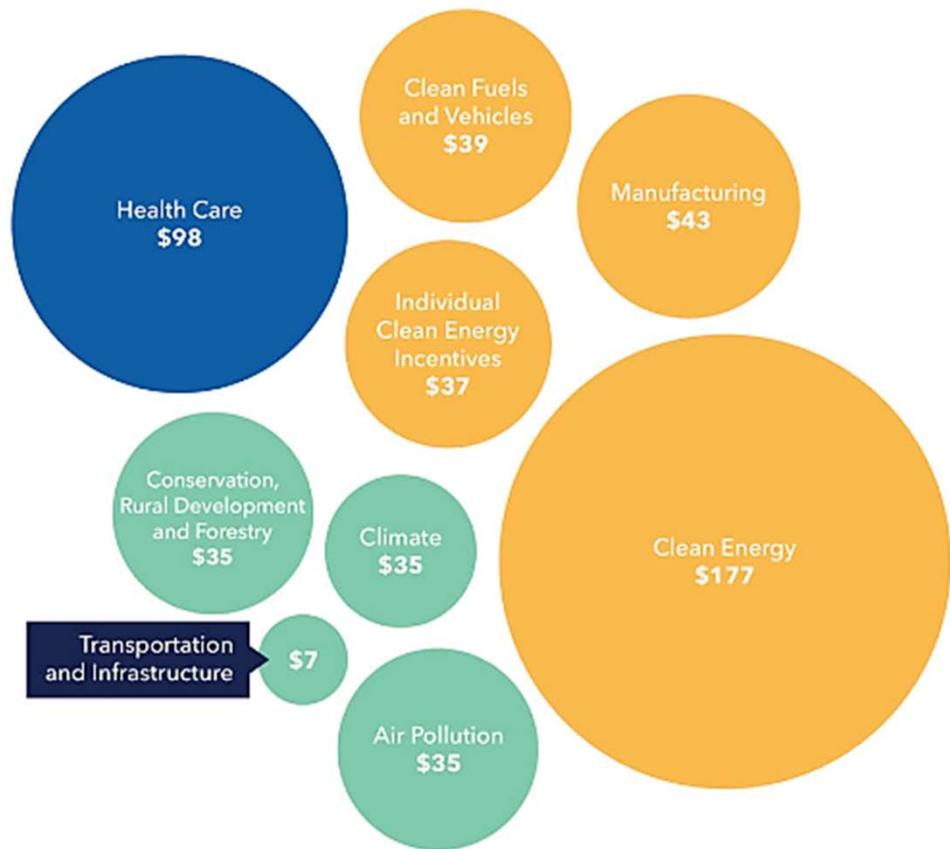
Linking the
sustainable future

The US Inflation Reduction Act

Spending and Tax Cuts

Figures in billions over 10 years from 2022-2031

● Health Care ● Energy ● Climate



392 USD billions

Cost (-)/Savings
(2022-2031)

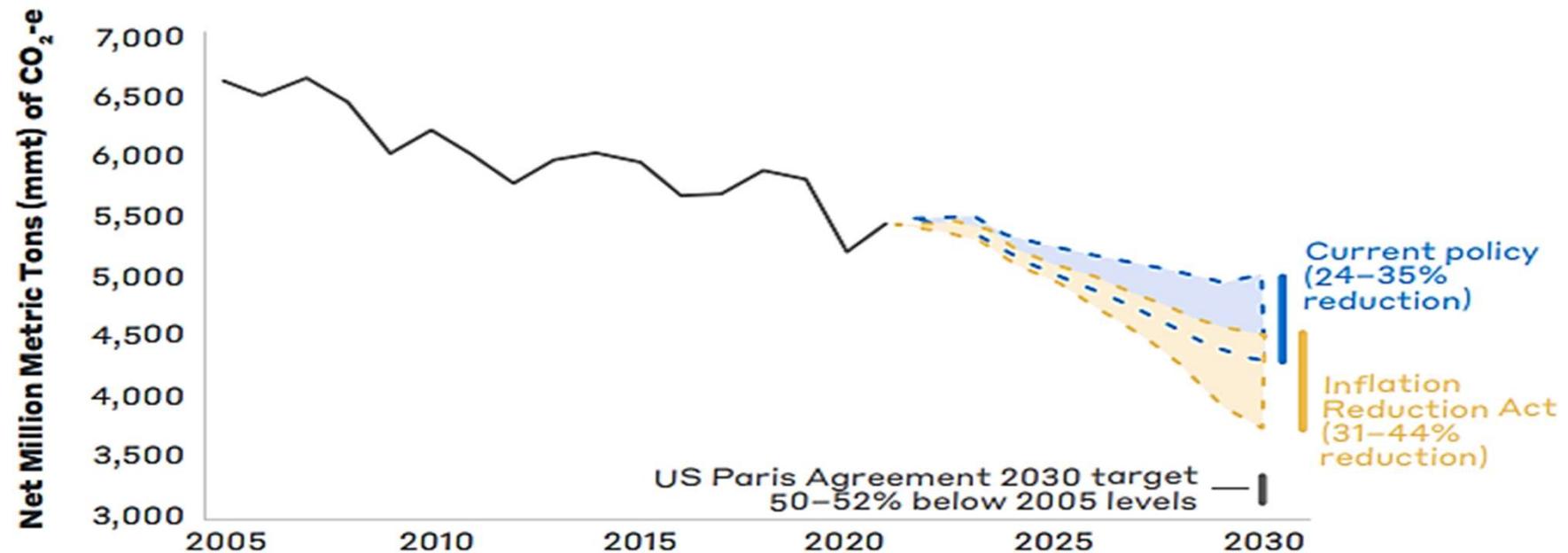
Policy

Energy and Climate	
	- \$392 billion
Clean Manufacturing Tax Credits	- \$37 billion
Clean Electricity Tax Credits	-\$161 billion
Conservation, Rural Development, Forestry	-\$35 billion
Individual Clean Energy Incentives	-\$37 billion
Clean Fuel and Vehicle Tax Credits	-\$36 billion
Drought Resiliency	-\$5 billion
Other	-\$81 billion

But spending is uncapped

The US Inflation Reduction Act

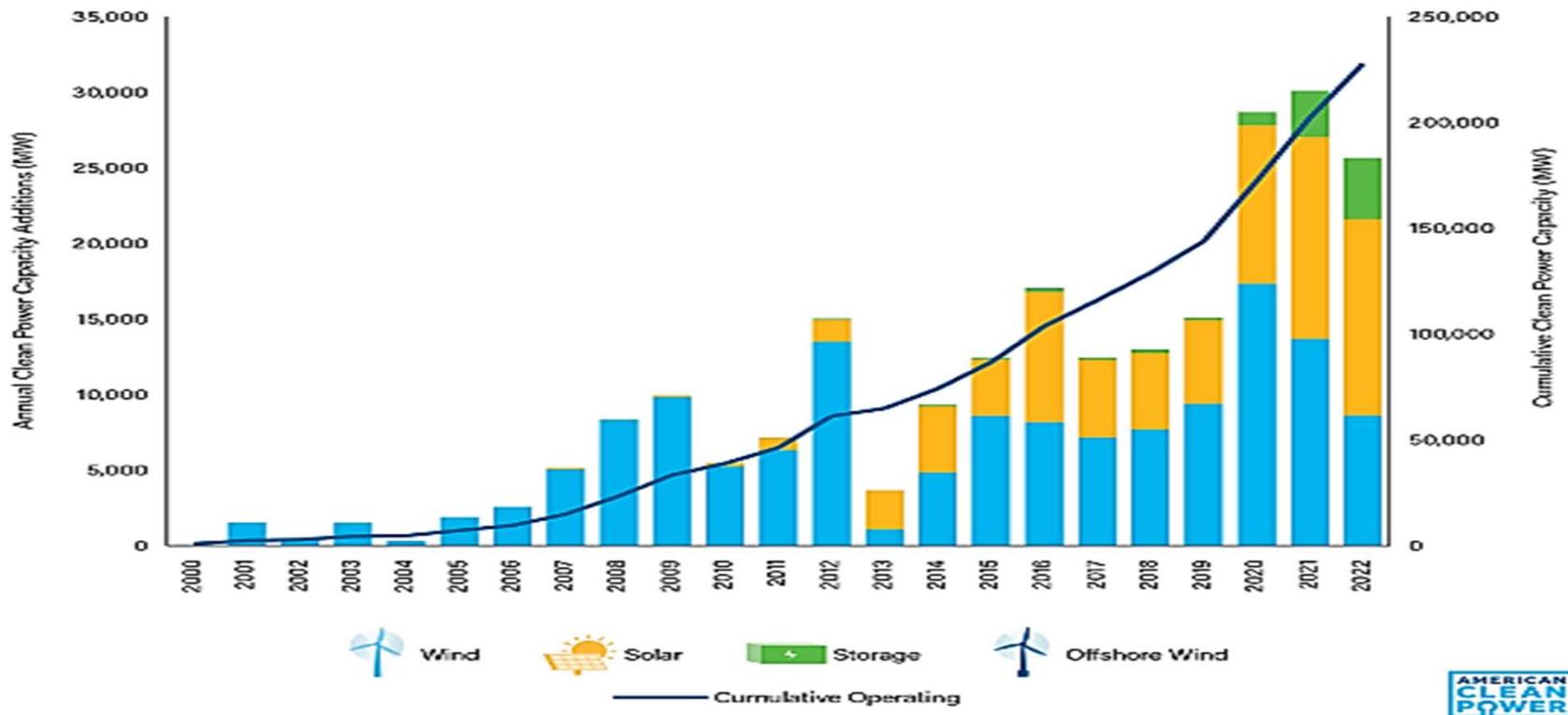
Figure 1: U.S. Greenhouse Gas Emissions



Source: [Rhodium Group](#). The range reflects uncertainty around future fossil prices, economic growth, and clean technology costs. It corresponds with high, central, and low emissions scenarios detailed in [Taking Stock 2022](#).

The US Inflation Reduction Act

U.S. Annual and Cumulative Utility-Scale Clean Power Capacity Growth

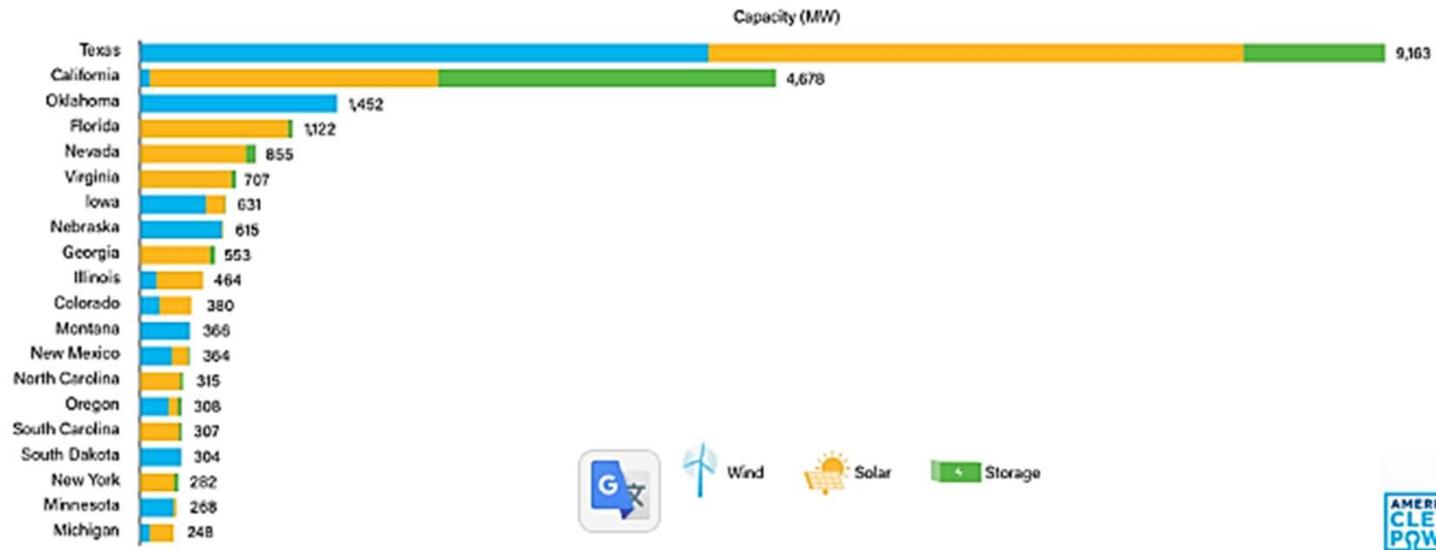


Source: American Clean Power Association



The US Inflation Reduction Act

Top States for Clean Power Additions in 2022



Source: American Clean Power Association

Nearly 81 percent of capacity is installed in low-income counties, and roughly 80 percent is installed in Republican-held congressional districts

Trade restrictions and anti-competitive measures

- The **US Inflation Reduction Act** contains subsidies to green technologies and domestic production of renewable energy and electric vehicles with the so-called **Local Content Requirements** (components must be produced in the US) which exclude foreign producers and/or favour relocation in the US
- Even though subsidies to green technologies support decarbonisation and trade through **further reductions of clean tech prices**
- The Local Content Requirements practice is anyhow **inconsistent with WTO rules**. For the first time, the US has put in place LCR subsidies, in clear violation of WTO rules.
- Side negative effects: **trade retaliations** (e.g. China bans chipmaker Micron)

Trade restrictions may have counterproductive effects on U.S. decarbonisation

1. For the first time in five years, **clean energy installations in the U.S. fell** last year, according to a new industry report that blamed delayed solar capacity on sourcing issues caused by trade restrictions
2. The U.S. is also trying to create a **domestic supply chain for the minerals needed to build EVs**, a supply now dominated by China. In 2021, the U.S. imported more than 25 percent of its lithium, 48 percent of its nickel, 76 percent of its cobalt, and all its graphite and manganese. Lessening reliance on those imports will make it **harder to spur widespread adoption of EVs**.
3. **High-speed trains** may also be a victim of the Biden administration's "Buy America" policy. The Inflation Reduction Act's generous tax credits to domestic sourcing requirements for clean energy technologies has contributed to tensions with foreign trade partners and to **delay U.S. high-speed rail hopes**.

EU policy may also have negative effects on trade

- The **EU Fitfor55 Package** contains tariffs to import of foreign goods which are proportional to their carbon content and to the taxation measures adopted in the origin countries (**but no LCR**).
- This mechanism, called **Carbon Border Adjustment Mechanism (CBAM)**, is designed to protect EU industries paying for their carbon emissions against companies producing in countries without carbon pricing. CBAM however is likely to have a negative impact on trade and to favour re-shoring
- At the same time, by reducing free allowances to some industries, it reduces subsidies to highly emitting companies
- Other example: **Regulation on deforestation-free supply chains**

Not only the US Inflation Reduction Act

- **Japan's** green transformation plans aim to raise up to JPY 20 trillion (approximately EUR 140 billion) – through 'green transition' bonds.
- **India** has put forward the Production Linked Incentive Scheme to enhance competitiveness in sectors like solar photovoltaics and batteries.
- The **United Kingdom, Canada** (a 80 USD billion plan) and many others have also put forward their investment plans in net-zero technologies

The EU Green Deal Industrial Plan (part of the European Green Deal) as a reaction to the US Inflation Reduction Act ?

Four pillars:

1. **A predictable and simplified regulatory environment (quick deployment, ensuring simplified and fast-track permitting, promoting European strategic projects, and developing standards to support the scale-up of technologies)**
2. **Faster access to funding (revise the General Block Exemption Regulation)**
3. **Enhancing skills (create Net Zero Industry Academies)**
4. **Open trade for resilient supply chains (Critical Raw Materials Act)**

Targets remain: -55% in 2030 and net zero in 2050

The EU Green Deal Industrial Plan is composed of:

- A **Net-Zero Industry Act**, to support industrial manufacturing capacity and strategic and multicountry projects in net-zero products by faster permitting and developing European standards.
- A **Critical Raw Materials Act**, to ensure access to critical raw materials which, like rare earths, are vital for manufacturing net-zero technologies and products.
- A **reform of the electricity market design**, to address energy prices volatility, while preserving security of supply, delivering affordable electricity, and bringing the benefits of renewable generation to European citizens and businesses.
- A directive on the use of harmonised **sustainability and circularity requirements in public procurement** that can help create a more predictable demand for net-zero products and solutions.

The Net Zero Industry Act

The Net Zero Industry Act is designed to strengthen the European manufacturing capacity of **Strategic net-zero technologies**:

The Act supports in particular **Strategic net-zero technologies** that are commercially available or soon to enter the market, and have significant potential for rapid scale-up to contribute to the EU's decarbonisation targets.



Solar photovoltaic
and solar thermal



Electrolysers
and fuel cells



Onshore wind and
offshore renewables



Sustainable
biogas/
biomethane



Batteries
and storage



Carbon capture
and storage



Heat pumps and
geothermal energy

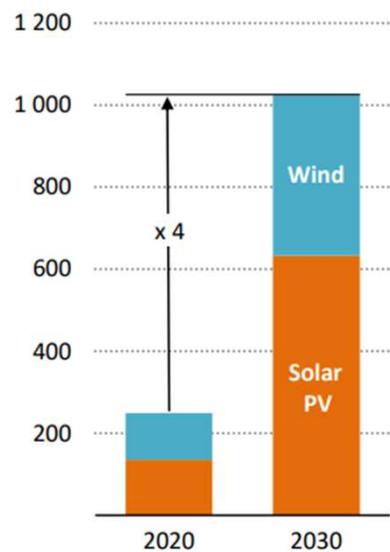


Grid technologies

Credit: European Commission

Rapid diffusion of green technologies is needed

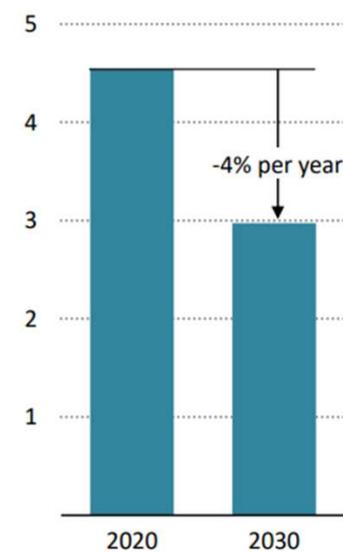
Solar PV and wind capacity additions (GW)



Electric car sales (millions)



Energy intensity of GDP (MJ per USD PPP)

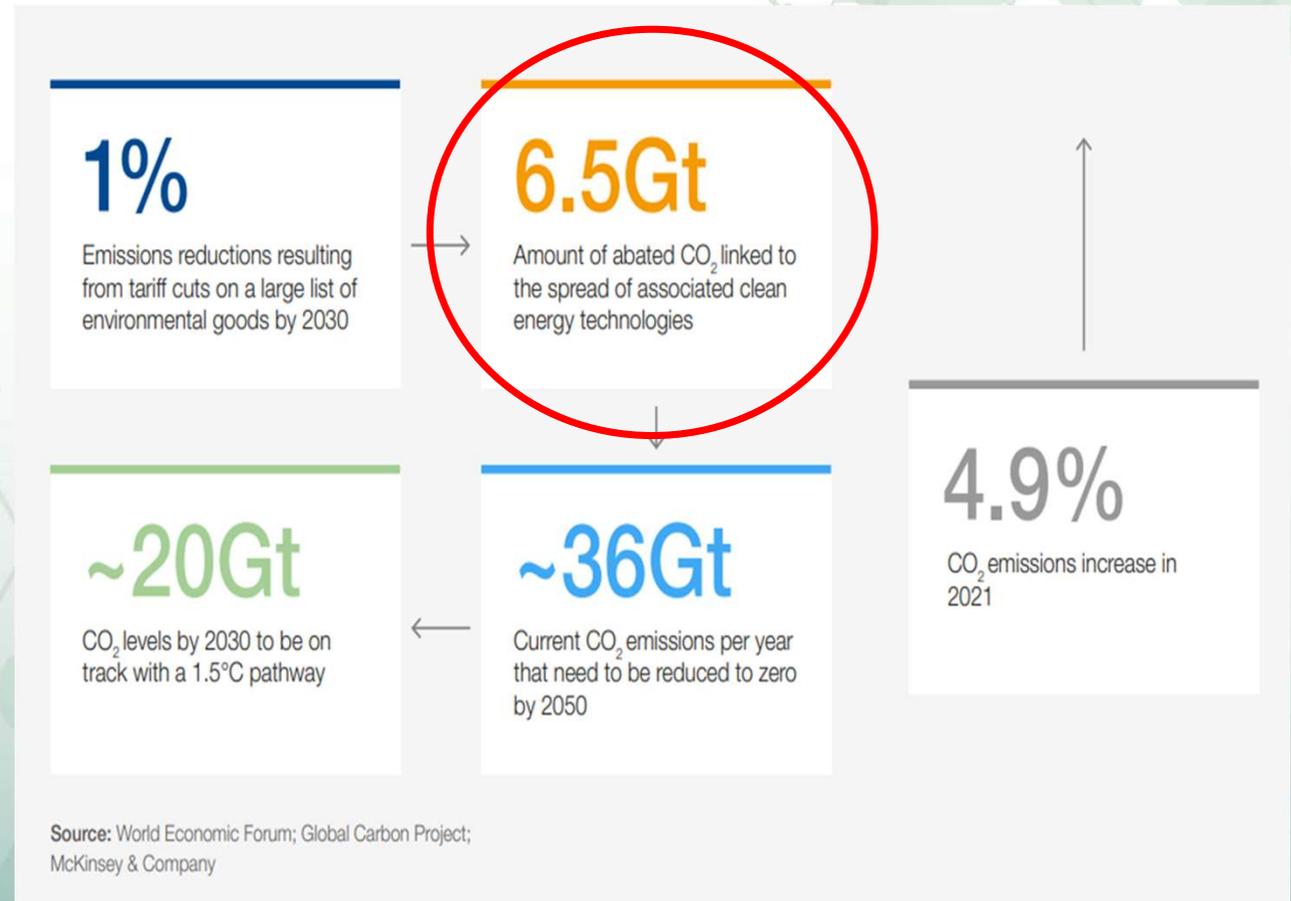


Technologies for achieving the necessary deep cuts in global emissions by 2030 exist, but staying on the narrow path to net-zero requires their immediate and massive deployment.

Source: IEA NetZeroBy2050

The importance of spreading clean energy technologies

Global production of electric vehicles will increase **18-fold** by 2050, while the deployment of renewables will nearly **quadruple**. Deployment of heat pumps will increase more than **six times** by 2050, compared to today and production of hydrogen from electrolysis or natural gas-based hydrogen with carbon capture and storage will reach **450 Mt** in 2050



ACTIONS

To stimulate investment into net-zero technologies, the Act proposes:



Net-Zero Strategic Projects

Priority projects essential for reinforcing the resilience and competitiveness of the EU net-zero industry



CO₂ injection capacity target

Carbon capture and storage projects will be supported, notably by enhancing the availability of CO₂ storage sites



Facilitating access to markets

Sustainability and resilience criteria in procurement procedures and auctions to help boost demand of renewables



Enhancing skills

Net-Zero Industry Academies, with the support and oversight by the Net-Zero Europe Platform, will provide training and education on net-zero technologies, and lead to quality job creation



Cutting red tape and accelerated permitting

Lower administrative burden for developing net-zero manufacturing projects and simpler and faster permitting procedures, in particular for strategic projects which will benefit from even faster permitting, to increase planning and investment certainty



Attracting investment

A Net-Zero Europe Platform and the European Hydrogen Bank will help attract investment



Innovation

Regulatory sandboxes to help develop and test innovative net-zero technologies and create a level-playing field for innovation

Focus on fast permitting and skills

Strategic autonomy and anti-coercion instrument

More than **90%** of solar photovoltaic (PV) wafers and certain other PV technology components are imported from China

More than **1/4** of electric cars and batteries are imported from China

China accounts for **90%** of global investments in net zero technology manufacturing facilities.

Funding

The EU proposal establishes a Net-Zero Europe Platform, recently renamed **Strategic Technologies for Europe Platform (STEP)**. Heading 7 of the EU budget will support the organisation of the Platform with a total of EUR 5.130 million. This translates into an annual expenditure of **EUR 1.026 million (1.02 billion)**.

Additional funding from existing EU programs:

- RePower EU (€270 billions, but 225 are loans)
- Recovery and Resilience Facility (€250 billions for the green transition)
- InvestEU (will mobilise about €372 billion of public and private investment over 5 years through an EU budget guarantee of €26.2 billion, similar to Juncker plan)
- Cohesion policy programme
- Innovation Fund (€ 40 billions over the decade)

But mostly **state aid/subsidies/tax benefits** according to the Temporary Crisis and Transition Framework

And possibly a future **European Sovereignty Fund** (in the mid term, but recently dismissed)

Investments in energy transition: 2004 – 2022

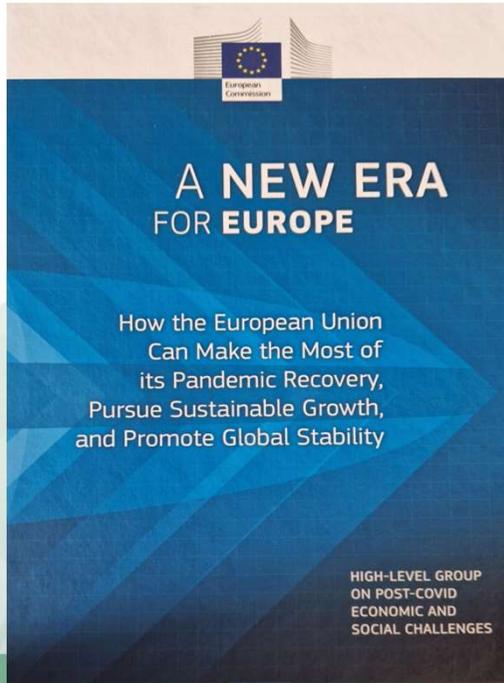
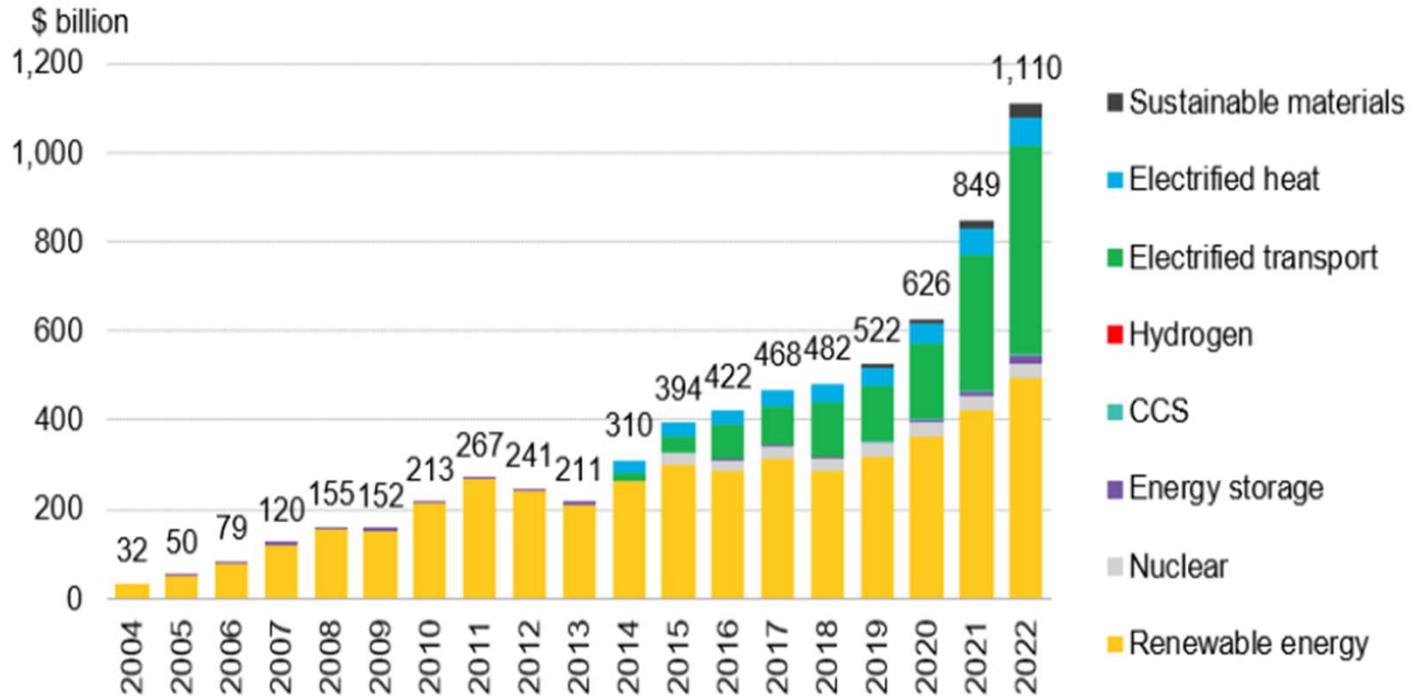


Figure 1: Global investment in energy transition by sector



Source: BloombergNEF

Present investment is about half of the "optimal investment" needed between 2020 and 2030, but steadily increasing, driven by the collapse in the prices of many technologies for the energy transition

Does the EU Green Deal Industrial Plan and the NZIA counteract IRA's trade restrictions?

“The EU will continue to develop the EU's network of **Free Trade Agreements** while making the most of those already in place through effective implementation and enforcement.

Will continue to cooperate with partners to support the green transition, like the **EU-US Task Force** on the Inflation Reduction Act.”

.....

“The Commission will also protect the Single Market from unfair trade in the clean tech sector with the **trade defence instruments** and, thanks to the Regulation on Foreign Subsidies, will ensure that non-EU countries' subsidies **do not distort competition** in the Single Market, also in the clean tech sector.”

“With the help of the EU framework on foreign direct investment screening and the **anti-coercion instrument**, it will also support proper responses to trade-related threats to the EU's economic security.”

Should the EU Green Deal Industrial Plan and the NZIA counteract IRA's trade restrictions?

The EU should **not impose local-content requirements of its own**, should not loosen state-aid rules and should not mimic the IRA's approach to manufacturing subsidies.

Rather, it should focus on **boosting its structural competitiveness**, formulate a trade policy response that includes reform of the international subsidies regime, and develop an instrument for EU-level subsidies that focuses on early-stage development and increasing EU resilience to trade disruptions.

In particular, the EU should adopt specific measures in **favour of clean technologies**. These include better regulation, green procurement rules and EU-level financing supporting new or early-stage clean-tech areas in which EU firms have the potential for sustainable competitive positions.

The EU should continue negotiating with the US administration to obtain an exemption from IRA LCRs, and possibly to launch WTO proceedings to obtain redress

Summing up

The expected IRA green subsidies are of **similar size** to those available in the European Union, except in renewable energy production, where EU subsidies remain far larger.

The IRA will likely harm Europe through its anti-competitiveness effect, while it will likely benefit climate transition in Europe and most of the rest of the world through lower technology prices

The EU is behind the US as far as fast permitting and networks are concerned (electricity networks but also hydrogen and CO2 pipelines) even though electricity networks are a big concern in the US (by 2035 high-voltage transmission network should increase by more than 50%, according to the US Energy Department).

Different networks are needed, from large and centralised to small and decentralised, from national to cross country, and smart.

The avoid counterproductive effects in the short term, cooperation with China is fundamental



Thanks!