Industry & Energy Transition Initiative (IETI)

Accelerating Spain & Portugal's energy transition and reindustrialization

June 18th 2025

Congreso Eólico Anual

mckinsey.com/ieti

In 2023, we launched the IETI – What is it?

Industry & Energy Transition Initiative

Think Tank

"We co-create and share prominent knowledge around key energy transition topics hand-in-hand with leading industrial and sectorial players"

Demand & Investment Accelerator

"Our purpose is to solve challenges and untap bottlenecks to create opportunities prompting an investment acceleration and demand on key industrial sectors"

Institutions become members by paying an annual membership fee

Access to all knowledge, discussions and events

Spain and Portugal have a unique opportunity to contribute to Europe's reindustrialization and decarbonization

Our Narrative

1 Europe has experienced a deindustrialization wave and loss of competitive edge during the past decades

The Energy Transition poses now a great disruption for the continent

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2 Spain and Portugal, thanks to their natural endowments, existing industrial base, and access to large talent pool with cultural affinity, can become champions of the decarbonization and reindustrialization of the continent

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3 The opportunity lies within the existing industries (through a gain in competitive edge) and with the formation of new ones (new energy vectors and value chains)

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4 This transformation is long and complex, and there is a lot at stake for Spain & Portugal – it could potentially boost GDP by approximately 10 percent by 2030 and create thousands of skilled jobs

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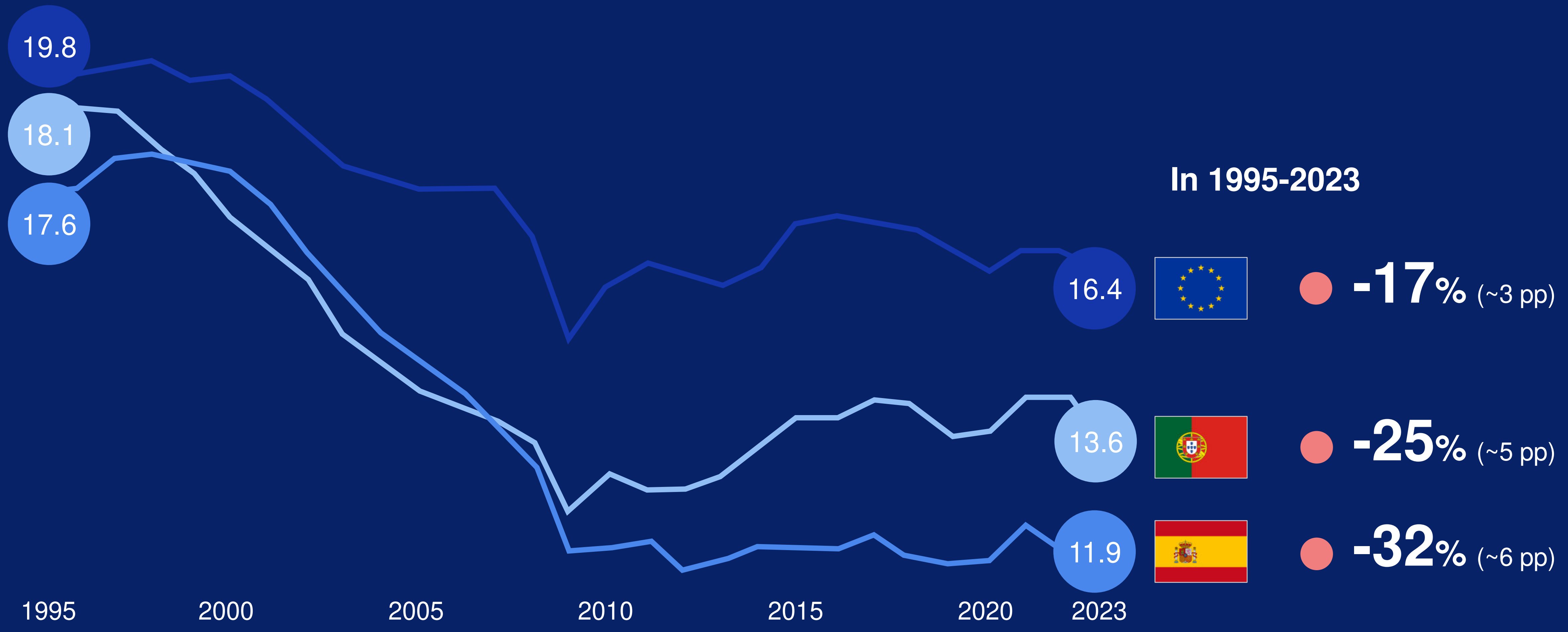
5 We need to act now, as we are losing the opportunity "window", and it is urgent to deploy a set of unlocks that could unleash the full potential of the Iberian Opportunity

1. Europe has overall shown a deindustrialization trend over the past decades, with Spain & Portugal losing space in a faster manner

European vs. Spanish and Portuguese: share of manufacturing industry in the economy



Note: measured as share of industry in total gross value added (GVA)

Source: Eurostat

1. Vision for Europe's competitiveness is very aligned with our narrative on industrialization and decarbonization to boost growth

Summary of from Draghi's report on the Future of European Competitiveness

Very strong alignment with IETI's narrative

	A new industrial strategy	Massive investment needs	Institutional reforms	Preserve Europe's core values
Key takeaways	Full implementation of Single Market; industrial, competition and trade policies supporting strategic sectors notably green tech, digital technology/AI, and space & defense Faster productivity growth via innovation and digitization Maintain manufacturing leadership and develop new breakthrough technologies	To digitize, decarbonize and increase EU´s defense capacity, the total investment-to-GDP rate will have to rise by **5pp of EU GDP per year or Eur800Bn more per year**, to levels last seen in 60s/70s	Reform EU´s governance, increasing the depth of coordination and reducing regulatory burden Refocus the work of the EU on the most pressing issues and allow member states who want to move faster to do so	Preserve social inclusion, prosperity, equity, freedom, peace and democracy in a sustainable world

3 priorities for Europe

- **Innovation:** close the innovation gap with US and China; especially in advanced technologies
- **Decarbonization:** source of growth and competitiveness; lower energy prices to reduce gap vs US
- **Security:** increase security and reduce dependencies; secure supply chain for critical technologies

2 key enablers

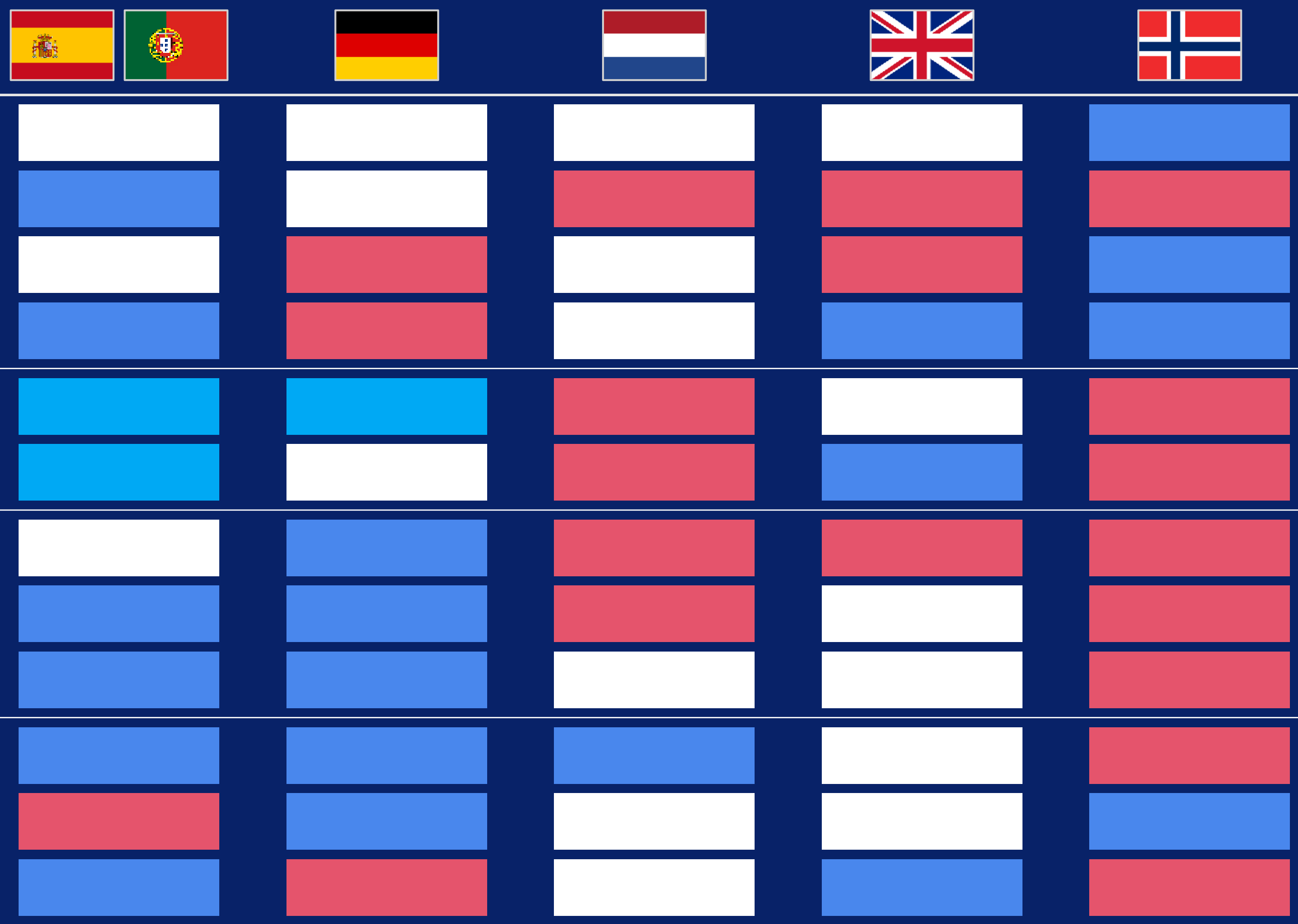
- **Financing:** common funding for key projects, grids and innovations
- **Governance:** increased efficiency, streamline legislations and shorten legislative process; more majority votes; more coordination across

2. Spain and Portugal can leverage natural endowments to lead the energy transition beyond energy costs

Country relative competitiveness

Leading On-track Lagging

Competitiveness dimension	Indicator
Energy OPEX	Renewables share
	Solar LCOE
	Onshore wind LCOE
	Cost of green hydrogen[1]
Input materials OPEX	Lithium mining capacity
	Biogenic CO2 supply
Industrial base CAPEX	Steel production
	Vehicles produced
	Refining capacity
Existing infrastructure CAPEX	Annual container port traffic
	Pipeline export capacity[2]
	LNG terminals capacity[3]



1. Considering current LCOEs for the best locations within the countries | 2. Considering the maximum of exports and imports pipeline capacity | 3. Only considering large-scale LNG terminals

Source: Ember, Enerdata, IRENA, McKinsey LCOE model, FCHO, Greenea, Fischer Data, S&P Platts, IHSM DCP, EUROFER, WorldBank, McKinsey refining capacity database, MineSpans, IHS Markit, GLE, entsog

3. The opportunity lies within the existing industries and with the formation of new ones

A. Energy play

Lead on most cost-effective green energy production

- Electrification and renewables
- Renewable molecules and circular materials
- Green Hydrogen and derivatives
- Other…

~20%
lower cost of clean energy
a key enabler to economic growth

B. Industry play

Scale up existing industries and develop new ones through decarbonization levers

- Industry decarbonization and competitiveness
- Emerging sectors, e.g., electric vehicles, batteries, data centers and green steel
- New technologies, e.g., carbon capture and storage
- Other…

4. The opportunity at stake could entail substantial socio-economic impact to the region

2024 estimates

Impact on GDP[1]

(% 2022 GDP)

Up to +15%

(up to 170 Bn€ in Spain & 35 Bn€ in Portugal)

Increased exports

(% 2022)

Up to +20%

Total Jobs,

#

~1M

(~700k in Spain,
~300k in Portugal)

…of which, qualified positions,

~200k

Additional state income,

(% 2022)

+5-10%

1. GDP impact is measured using Input-Output tables for Spain & Portugal sourced from MGI, along with global tables from OECD, which help to estimate how additional revenues translates into domestic value creation. The outcome is a Gross Value Added (GVA, which measures sectorial contributions to GDP)

Source: Industry and Energy Transition Initiative (2024), *The Iberian green industrial opportunity: Seizing the moment* [Link]

5. We identified 5 key actions to accelerate Iberia's leadership, boosting competitiveness and supporting European goals

Effective incentives schemes

Deploy **effective incentive schemes** to close the **cost competitiveness gap** between **green solutions** and **fossil-based alternatives**

Clear and stable regulation

Provide **effective** (simple and flexible) and **stable** (long-term certainty) **regulatory frameworks** to ensure **projects**' **predictability** and **robustness**

Faster and smoother permitting

Reduce **administrative burdens** and **shorten permitting processes** (e.g., one-stop-shops, homogenization) to minimize **long permitting periods**

Strengthen project bankability

Develop strong **project cases** (e.g., long-term agreements, alliances) to ensure **robust** and **stable financing schemes**

Urgent & substantial grid deployment

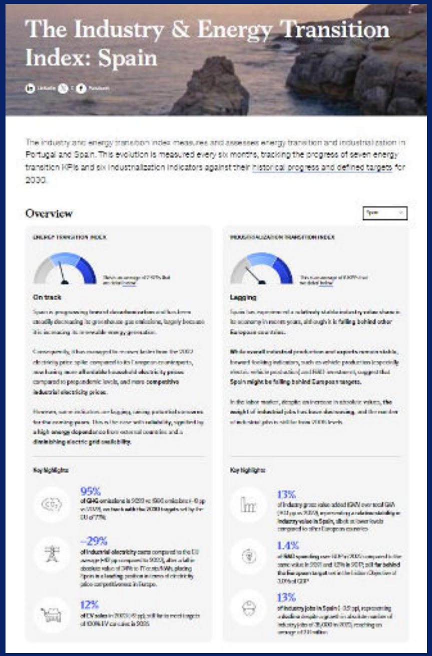
Plan and deliver **efficient grid deployment programmes** to ensure coordinated **uptake** between **projects** and **electrification increase**

We additionally developer an Index that measures the progress of the Industrialization & Energy Transition in Iberia

The Index

Measures and assesses the state of the art of the energy transition and industrialization in Spain

Provides insight on a list of KPIs against historical progress and nationally defined targets every 6 months



Spain

Publication date: 12/11/24

Link

Portugal

Publication date: 27/11/24

Link

Energy Transition

Sustainability

1. **Greenhouse gas emissions** *+detail by sector*
2. **Renewables in energy mix**
3. **Electric Vehicles sales**
4. **Renewable molecules adoption**

Reliability

5. **Energy dependency**
6. **Networks readiness**

Affordability

7. **Household electricity prices**

Competitiveness

8. **Industry electricity prices**

Industrialization

Industrial production

9. **Industry gross value added**
10. **Vehicle production**

Investments

11. **Investment in fixed assets**
12. **R&D investments**

Employment

13. **Industry employment**

Exports

14. **Industry exports**

Based on IETI's Index, Spain and Portugal are on track on the energy transition but lagging on industrialization

Energy transition[1]

On track

to achieve 2030 targets

- GHG emissions reduction
- Energy dependency
- Renewables in energy mix
- Network readiness
- Electric vehicle sales
- Household electricity prices
- Renewable molecules adoption
- Industry electricity prices

Industrialization[2]

Lagging

to achieve 2030 targets

- Industry gross added value
- Investment in R&D
- Vehicle production
- Industry employment
- Investment in fixed assets
- Industry exports

1. Out of eight indicators: For Spain, 1 Leading, 3 On track, 3 Lagging, 1 N/A; For Portugal: 3 Leading, 3 On track, 1 Lagging, 1 N/A | 2. Out of six indicators: For Spain, 0 Leading, 2 On track, 4 Lagging; For Portugal,1 Leading, 1 On track, 4 Lagging

Source: McKinsey & Company – Industry and Energy Transition Initiative (2024), *The Industry & Energy Transition Index: Spain* [Link] & *Portugal* [Link]