

# Bruegel Blueprint

## A green industrial policy for Europe

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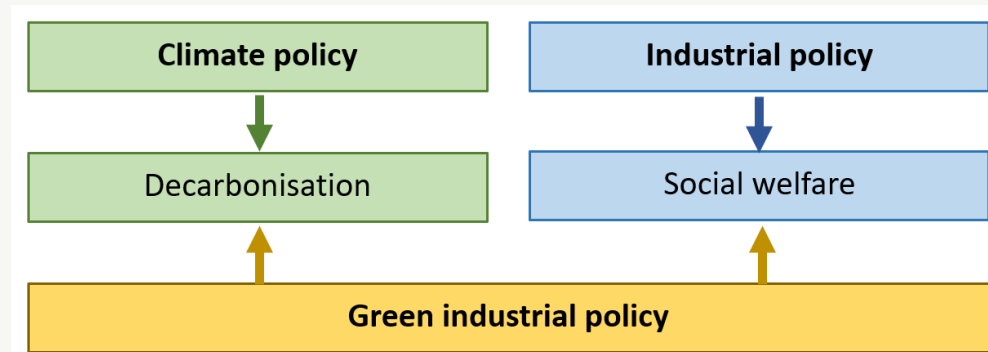
- EGD: 55% emissions reduction by 2030 & **climate neutrality by 2050**
- **EGD** implies big transformative changes for business and society at large, with winners and losers
- **Ensuring enough winners of the EGD is vital** to keep the process unfolding, because decarbonisation will either be economically viable and socially supported, or it will not
- Major question: how to **turn decarbonisation** into an **opportunity** to transform **EU industry** to **ensure long-term social welfare?**
- Increasing attention on Industrial Policy component of EGD: GIP, but its **concept remains unclear**
- Provide a set of **principles and tools** for the development of a **GIP** and recommendations for EU GIP

# Defining green industrial policy

- GIP: an **industrial policy** where **climate change mitigation becomes a binding constraint in the policy objective**
- **Key challenge** for GIP: **address both** classic market failures (IP) and the GHG emissions market failure (CP)

## Market failures

- GHG emissions externality



## Market failures

- Public goods
- Knowledge and information externalities
- Coordination failures
- Uncertainties and info asymmetries

GIP needs to go beyond the general industrial policy toolkit, asking for a **GIP policy mix, with at least coordination of CP & IP instruments, possible supplemented with dedicated GIP instruments**

# A New Industrial Policy approach for a green industrial policy

New industrial policy acknowledges a broader **multidimensional** set of objectives (beyond competitiveness)

New industrial policy acknowledges both the need for intervention, rooted in market failures, and the **implementation difficulties** (government failures)

New industrial policy moves the debate away from the view of industrial policy as a mere set of tools to allocate resources, towards understanding it as a **process**.

- 1 **Information capacity** of bureaucrats and administrators to allocate correctly public resources on the market (particularly when picking winners)
- 2 **Risks of rent seeking** and “**capture**” (e.g. lobbying efforts to capture rents coming from public finances, notably in poor institutional quality settings)



# Insights from “new industrial policy” for CC policies

- Strong operational governance to address coordination among different types of stakeholders, different policy governance areas
- Flexible policy design, addressing the information problem with learning from monitoring & evaluation;
- Public private partnership, blended finance; willingness to co-finance from private sector to weed out rent-seeking
- Long-term commitment and accountability from parties involved through a balanced set of sticks and carrots
- Allow for policy experimentation, but with clear monitoring & evaluation plan, such that unsuccessful experiments are stopped/restructured in time
- Taking risk, not avoiding failure, by targeting particularly new to be developed eco-systems and markets, with stakeholders previously unconnected. Adapting dedicated processes and instruments to de-risk “new” projects (smart development banks, intermediate milestones...)
- Beyond (co)financing, also instruments shaping the framework conditions for solutions to work and about solving information failure and coordination failure
- Deploy a mix of policy instruments: carbon pricing, grants&co-financing, green regulation and standards, green public procurement...

Source: Tagliapietra & Veugelers (2020) A green industrial policy for Europe, Bruegel Blueprint Series nr 31

# Green industrial policy in practice

After looking into GIP in practice in **Germany, the Netherlands, Denmark** and the **United States** the following elements showed a strong importance in the success of the policy:

- 1 Effective collaboration between all elements of society**
  - i.e. Citizens must accept policies, private sector must contribute with knowledge and expertise
  - ex. Dutch Klimaatakkoord, Danish cooperative ownership structure in wind industry, German public-private partnerships
- 2 Long-term policy stability and predictability**
  - ex. Stable and sensible policy support helped Danish wind industry  
Dutch policy inconsistency impacted the effectiveness of energy transition programmes  
Progressively adapted targets for EE in buildings in Germany exemplifies predictable policy
- 3 Not putting all eggs into one basket**
  - i.e. Need for a balanced set of instruments
    - Mixing demand pull – technology push
    - General and horizontal – specific and targeted instruments
- 4 Clearly defining and understanding the relative importance of “green” and “industrial policy”**
  - ex. Germany’s solar panels experience is not a failure in terms of green goals and there is economic value added and jobs created in the servicing of solar panels

# Green industrial policy in the EU

EU

National

Regional

	Innovation and technology	Investments and deployment	Framework conditions
EU	Framework programmes (Horizon Europe); European Innovation Council; Missions; EU Innovation Fund	EU budget and Next Generation EU; European Investment Bank; Single market rules (e.g. green public procurement)	Coordination of national industrial policies (e.g. European Semester, RIS3, IPCEIs); Competition policy; Environmental standards; Climate policy (e.g. carbon price, renewable and energy efficiency targets, clean standards); Development policy; Monetary policy
National	Public R&D spending; Intellectual property protection law (at EU level)	Consistency of macroeconomic policies with industrial strategy; Climate targets; Environmental standards; Environmental taxation	Government investment programmes, incentives, subsidies, public procurement, clean energy standards
Regional	Implementation of public-private partnership in place-based setups (e.g. university-industry collaborations)	Smart specialisation strategies; Regional Investment budgets; Implementation of EU Cohesion policies	Regulations (such as buildings energy efficiency)

➔ Multitude of policy initiatives on different geographical layers and competencies, **need for coordination** to ensure single market scale, a level playing field and avoid conflicting initiatives

# Main EU GIP tools: CC regulations&taxes

- **Climate targets**
  - ✓ 55% emissions reduction by 2030 (to be approved by EP)
  - ✓ Climate neutrality by 2050
- **Carbon pricing**
  - ✓ Emissions Trading System
  - ✓ Effort Sharing Regulation for non-ETS sectors
  - ✓ Energy Taxation Directive
- **'Green legislation'**
  - ✓ Renewable energy and energy efficiency directives
  - ✓ Road transport CO2 standards
  - ✓ Agriculture, land use, land use change and forestry regulation



# Main EU CC innovation policy tools: Financial support

- **Horizon Europe**

- ✓ About €100 billion in grants for 2021-2027 (MFF, NextGenerationEU)
- ✓ 35% of Horizon Europe allocated to climate action
- ✓ New: EIC and Missions

- **EU Innovation Fund**

- ✓ Established in the ETS for the period 2021-2030, it supports demonstration of low-carbon technologies and processes in energy-intensive industries
- ✓ Endowed with carbon allowances (around €11 billion)

# Main EU CC innovation policy tools: Financial support

- **Multiannual Financial Framework (MFF)**
  - ✓ MFF 2021-2027: About €1000 billion – 30% to be devoted to climate action
  - ✓ NextGenEU 2021-2024: €750 billion – 37% to be devoted to climate action
  - ✓ Between 2021 and 2027 around €550 billion of ‘fresh’ EU resources will be made available for the green transition
- **European Investment Bank (EIB)**
  - New 2019 strategy: becoming Europe’s ‘climate bank’
  - New energy lending policy and sustainability strategy based on 3 pillars: i) End of fossil fuel projects financing from end-2021; ii) Focus future financing on green energy technologies; iii) Unlock EUR 1 trillion of green investments by 2030

# Main EU tools: European Alliances

- European alliances aim at **creating European integrated, cross-border, value chains** in technologies that are considered as central for the future of the energy transition
  - Examples: ‘European Battery Alliance’ and ‘European Clean Hydrogen Alliance’
- They constitute a **network** of key industrial and innovation players (including SMEs), regional authorities, national authorities, the EC and the EIB
- Importantly, projects developed in this context are **Important Projects of Common European Interest** and are thus **allowed to receive State aid**

# EU policy recommendations

1

## Further development of public-private partnerships (Alliances, Missions..)

- Selection and governance based on **new green industrial policy principles** cf supra
- to activate **co-funding**, access **skills, knowledge** and **information**

### Expanding the use of the **European Alliances format**

- Focus on **mega-problems** covering whole value chains of all relevant clean markets
- Iterative collaborations between a **broad set of actors**: institutions at regional, national, EU level with businesses from different parts of the value chains and citizens.
- Broader and deeper application of **IPCEI** (Important Projects of Common European Interest)
- Employment of a **balanced mix of**
  - Ⓐ Already-connected value chains that need to be scaled-up  
BUT ALSO (and perhaps MOST)
  - Ⓑ Very early-stage emerging value chains with still-to-be-connected stakeholders (regardless of higher failure rates)

Make use of the **EU competition policy toolbox**, *given sufficient dedicated expertise*, to **avoid rent seeking** and ensure the power of **competition for innovations** in new clean markets

# 7. EU policy recommendations

## 2 EU green investment

30% of **EU budget** for 2021-2027 to climate action is good news, **but**

- A Ensure that the remaining spending does not go against the green targets
  - ↳ **Green monitoring** of the EU budget and Next Generation EU funding
- B Climate-related spending could be overstated with current EU accounting rules
  - ↳ Develop a solid **methodology** for monitoring climate spending and report on it annually

Make the **European Investment Bank** (EIB) Europe's true "**climate bank**", **because**

- A The EIB currently benefits from very **favourable rates** for borrowing from capital markets (a capital increase can be carried it out, if (unduly) worried about rating)
- B Opportunity to further develop the EIB's role as intermediary to address **network and information imperfections**: EIB as smart green **development** bank

The **European Central Bank** can use its operations, such as its **large asset purchase scheme** to pursue green objectives

# 7. EU policy recommendations

## 3 EU green science and innovation

Allocation of public finance to projects with largest **socio-economic and climate returns**, focus on **early stage technologies** with potential for general-purpose breakthroughs

- A A portfolio that includes risk-taking and not only safe bets with average returns
- B New support models that provide grants in a relatively non-bureaucratic way



Leverage EU public resources and toolkit to scale-up national and regional public resources that go into climate innovation + mobilise private investment

### Horizon Europe as a key component of GIP

- A Ensure that the **remaining 65% of budget**, not going to climate innovation, does not work against green targets
- B New climate change **missions** beyond the current three
- C Balance between directed and bottom up (EIC, ERC)
- D Preference/no-bias-against **risky early stage clean projects**

# Thank You For Your Attention

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<https://www.bruegel.org/2020/12/a-green-industrial-policy-for-europe/>

Publications on clean innovations downloadable at  
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