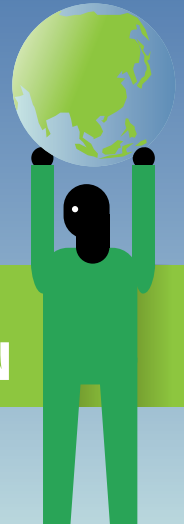


# POLICYMAKERS HOLD THE KEYS TO A RAPID TRANSITION



## POLICIES TO UNLOCK DEEP DECARBONISATION

**The decarbonisation of hard-to-abate sectors<sup>1</sup> requires targeted policy support to ensure rapid emissions reduction, avoid stranded asset risks, and develop transition opportunities.**



Effective policy support will help to overcome market failures and problems of inertia, increase the green asset pipeline and channel funding to transition the whole economy. Transition policy development will enable countries to develop new green industries, conserve their natural resources, and ensure sustainable growth.

These policies will ensure sufficient levels of ambition, drive investment flows to deliver ambition, and facilitate rapid action: making the transition green, cheap, and easy. Transition policy frameworks should be guided by certain overarching principles: efficient use of resources, avoiding lock-in of high-carbon technology, ensuring smooth/just transition, and prioritising uses of scarce technologies.

While every sector and country will have a different decarbonisation pathway, requiring specific, targeted policies, there are certain key policies that can accelerate hard-to-abate transition globally. This briefing follows the recent report '101 Sustainable Finance Policies for 1.5°C' and proposes 12 of the 101 policies that are critical for facilitating the transition of hard-to-abate sectors.<sup>2</sup>

Key transition policies and implementation in the G20		✓ Implemented	* Under consideration/planned																		
Policy	Jurisdiction																				
		Argentina	Australia	Brazil	Canada	China	EU	France	Germany	India	Indonesia	Italy	Japan	Mexico	Russia	Saudi Arabia	South Africa	South Korea	Turkey	UK	USA
Simplify	1. Standards		*		*	✓	✓	✓	✓		✓	✓	✓	*	✓		✓	✓		*	
	Incorporate transition risk	2. Disclosure requirements		*	✓	*	✓	✓	✓		*	✓	✓					✓			✓
3. Energy transition mechanisms							✓	✓	✓		✓						✓			✓	✓
4. Carbon pricing		✓				✓	✓	✓	✓			✓	✓	✓			✓			✓	
5. CBAM					*		✓													*	
Derisk green opportunities	6. Derisking instruments	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓					✓	✓	✓
	7. Contracts for difference				*		*	✓	✓			✓								✓	
	8. Green trade window									✓										✓	
	9. Priority infrastructure investment		✓	✓		✓	✓		✓			✓						✓		✓	✓
	10. R&D		✓	✓	✓	✓	✓	✓	✓			✓	✓			✓	✓	✓		✓	
Facilitate investment	11. Green public procurement				✓	✓	✓	✓	✓	✓		✓	✓	*			✓				
	12. Critical raw materials investment	✓	✓	✓	✓	✓	✓	✓		✓		*	✓		✓	✓	✓	✓		✓	✓

## Simplify: clarity on what path to take

### 1. Standards: establish clear definitions to provide guidance on what constitutes a transition or green investment activity.

Sustainable investment can be hindered by uncertainty over what is credible, lack of capacity to identify climate/nature-aligned investments, and lack of knowledge of sectors' decarbonisation pathways.

**Scientific standards** guide investment to credible transition activity and provide investors with clarity in complex sectors.<sup>3</sup> They can also be used when setting regulations and incentives for sector decarbonisation.<sup>4</sup>

Science-based standards can take the form of national/regional taxonomies which, in turn, should align with international standards to encourage cross-border capital flows.

Initiatives are underway to facilitate alignment between international taxonomies such as the International Platform for Sustainable Finance's EU-China **Common Ground Taxonomy** (CGT) which can be used as a basis for taxonomy development. For example, Hong Kong is building on the CGT to act as a hub for international capital flows.<sup>5</sup>

## Steer: incorporate transition risk and opportunity

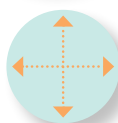
### 2. Disclosure: mandate climate disclosure requirements for corporates and financial institutions and encourage green and transition investment.

Transparency is at the heart of transition. If investors do not understand what and how their investee companies are planning/performing/acting, it is impossible to assess their investment portfolios. While voluntary disclosures have improved over the past decade, investors still face immense challenges in securing, validating, and comparing disclosures.

**Mandatory climate- and nature-related disclosures** can ensure consistency, comparability, and confidence for investors. To maximise the quality of corporate disclosures, regulation should:

- **Include full value chain disclosure requirements** to encourage emissions reduction and minimise environmental impacts such as biodiversity loss, long-term damage to ecosystems, and deforestation from supply chains.
- **Require and assess publication of transition plans** to ensure financial flows are 1.5°C-aligned,<sup>6</sup>
- Provide sector-specific and sector-neutral guidance on transition plan formulation,<sup>7</sup>
- Align with taxonomies, standards, and other guidance to ensure consistency of approach across the whole of government,
- Provide guidance on standardisation of key metrics,
- Provide a centralised data platform for disclosures.<sup>8</sup>

Decision-useful disclosures can, in turn, inform and aid better policy in the longer term, for example, by providing the data to assist in setting accurate policy signals in the future.



### 3. Energy Transition Mechanisms: establish ETMs to reduce stranded asset risk and safeguard climate targets.

The long lifetimes of fossil fuel infrastructure mean many plants will need **early decommissioning** if we are to meet 2030 and 2050 climate targets.<sup>9</sup> Whilst there may be significant costs associated with phaseout, sudden disorderly transition or asset stranding will likely result in greater costs once decarbonisation deadlines materialise.

An **Energy Transition Mechanism** (ETM) is usually defined as an initiative developed in partnership (e.g., between countries, sometimes including development banks) to leverage a market-based approach to accelerate the transition from fossil fuels to clean energy. ETMs involve governments, multilateral development banks, private investors, and philanthropies to finance the retirement of fossil power assets on an earlier schedule than if they remained with their current owners.

ETMs can support an orderly and accelerated fossil fuel phaseout; winding down fossil fuel assets and their obligations, supporting the just transition of the workforce, and enabling the buildout of renewable energy assets and infrastructure.

In EM, **concessional financing** from development banks or other nations may be needed to fund phaseout. For example, South Africa's USD8.5bn Just Energy Transition Partnership Investment Plan is funded by the EU, France, Germany, UK, and US. However, only 3% of this is grant financing, raising concerns over the impact on the country's debt burden.<sup>10</sup>

These mechanisms will need careful regulation, to ensure phased-out plants are not replaced by new fossil fuel assets and ensure funding is not absorbed by plants already near the end of economic life.<sup>11</sup>

Fossil fuel assets can also be **repurposed** for a net-zero economy; for example, utilising grid connections for RE installations, or converting plants to run on renewable energy sources such as waste biomass.

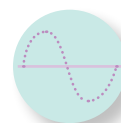
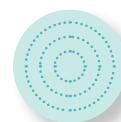
### 4. Carbon price: adopt meaningful, stable, and economy-wide carbon pricing to encourage clean investment.

**Carbon pricing**, through a carbon tax or emissions trading scheme (ETS) is implemented to capture the external cost of greenhouse gas emissions (to society) and charge this to emitters. This can improve the business case for green technologies and incentivise emissions reductions.

Aligning carbon pricing with fossil fuel subsidy phaseout will prevent incremental change in response to the carbon price and ensure clarity of policy signals. **Phaseout of fossil fuel subsidies**, which reached USD1tn/year in 2022,<sup>12</sup> will make the true cost of fossil fuels clear, ensure clarity of signals on climate, and frees up budgetary space for other investments. This must also include indirect subsidies, such as on fossil-gas based fertiliser.<sup>13</sup> **A clear phaseout plan, including reallocation and transition support**, is important to prevent economic shocks from the removal of subsidies, and minimise adverse social impacts. For example, Singapore eliminated petrol subsidies in 2015 at a time of low fuel prices and reallocated the spending to social development.<sup>14</sup>

### 5. CBAM: implement carbon border adjustment mechanisms to incentivise global action.

One argument against carbon pricing is that of carbon leakage, where carbon-intensive industries move offshore to avoid carbon taxes. A **carbon border adjustment mechanism** (CBAM) applies the local carbon price to imports of carbon-intensive goods, accounting for any pricing applied in the country of production. A CBAM incentivises exporters to reduce their carbon emissions and export countries to implement their own carbon pricing schemes to capture this revenue. It also removes the case for granting free allowances.



# Steer: derisk green opportunities

## 6. Derisking: establish green derisking facilities to enable investment in key green technologies.

Demand for sustainable investments is high but investor risk appetite is also too low for many of the key investments that are essential to transition, such as those in innovative technologies or emerging markets.

Derisking instruments can help to reduce the risk associated with an investment and therefore reduce the cost of capital for the borrower/issuer.

**Direct subsidies** reduce the cost of producing or consuming a product, commonly through tax concessions. They are important to scaling transition technologies at domestic or industrial scale. Tax credits available for clean hydrogen production in the US Inflation Reduction Act could bring green steel in cost parity with conventional steel production.

**Guarantees** can derisk larger-scale projects, addressing the investment risk of first movers and encouraging private sector investment. Guarantees are critical to facilitating financial flows because they enable long-term stable investment and result in lower balance sheet liability than direct subsidies.

Issuers in nascent technologies and/or emerging markets can face substantial cost of capital. A guarantee provides investors with the comfort that they will not lose their money, so they are willing to take a lower return and the cost of capital goes down. The InvestEU Fund aims to mobilise over EUR372bn of public and private investment through an EU budget guarantee of EUR26.2bn, 30% of which must support climate investments.<sup>15</sup>

Green guarantees need to:

- Align with taxonomies/standards,
- Establish clear phase-out dates to ensure that schemes do not stifle competitiveness and innovation – private investment has been proven to step in once subsidies are phased out.<sup>16</sup>

**Blended finance** provides support from the beginning to the end of a project. In blending, development banks or governments provide grants of capital and/or equipment and training. The concessional finance significantly reduces project risk for the commercial lender. To further reduce risk, the deal could also involve a guarantee.

## 7. Contracts for Difference: provide low-carbon producers with revenue certainty.

High production costs can be a barrier to green development if the market price of green products is the same as high-carbon equivalents. Contracts for difference are a type of government subsidy covering the cost difference compared to conventional production. For example, if steel production costs USD700/t and green steel production costs USD900/t, the government would cover the difference, providing a subsidy of USD200/t.<sup>17</sup>

CfDs and carbon contracts for difference (CCfDs) are auctioned to ensure competitive pricing. They also respond to falling production costs, this means that they are fiscally efficient.

Favouring technologies that allow for deep emissions reduction will **avoid incentivising incremental change** and promote projects that are on a Paris-aligned pathway.<sup>18</sup> Germany is planning pilot CCfDs to promote green hydrogen in steel and chemicals.<sup>19</sup>



## 8. Green trade window: provide preferential treatment for the international flow of green assets.

**Governments can reduce tariffs on environmentally-friendly goods and services through a 'green trade window'** to stimulate the flow of green capital and goods.

This can help to incentivise the greening of global industry and economic processes and improve the competitiveness of goods such as green steel. World Trade Organisation members are engaged in negotiations to establish an agreement to eliminate tariffs on environmental goods.<sup>20</sup>

A green window could also help to compensate for any carbon border tax-induced trade impacts (see policy 5).

## 9. Priority infrastructure investment: identify key infrastructure for investment and prevent bottlenecks.

New large-scale infrastructure development will be necessary in a global net-zero economy. For example, electricity grids need upgrading, renewable capacity needs to be increased significantly, and carbon capture and storage (CCS) will need scaling for decarbonisation of some hard-to-abate activities, such as to tackle process-based emissions in cement production. Total global green hydrogen use is also expected to balloon to 15-20% of the net-zero energy mix.<sup>21</sup>

**Prioritising grid interconnectors can ensure grid interoperability** and enable increased renewable energy penetration. This also helps guarantee investor returns as it allows the cross-border trade of energy. Other priority infrastructure includes electricity transmission and distribution to manage increasing demand for electricity, and batteries and geological green hydrogen storage for **grid balancing**.

The EU's Projects of Common Interest (PCIs) receive accelerated permitting and are eligible for financial assistance. PCI allocation is prioritised by those projects that have the greatest net-zero contribution.<sup>22</sup> For example, the application of CCS can be reserved for emissions which cannot be prevented. Standards are key to ensuring a sufficient level of emissions capture, ensuring longevity of storage, preventing CO<sub>2</sub> leakage at all stages of the process, and ensuring use of low-carbon energy.

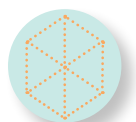
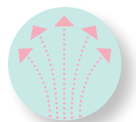
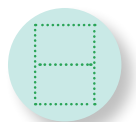
Governments can also establish **hydrogen clusters** to kickstart a hydrogen economy. These are areas where hydrogen production and consumption are developed together, ensuring demand and supply scale together. Simultaneous development of production, storage, transport, and use can derisk investment. Including renewable energy development in cluster requirements will also mean hydrogen production does not siphon too much from the grid, ensuring **renewable energy additionality**.

Other infrastructure clusters can also be established to enable the co-development of other green technologies such as CCS and low-carbon cement production.<sup>23</sup>

## 10. R&D: target underdeveloped decarbonisation technologies.

While some hard-to-abate sectors' decarbonisation pathways are well understood and already at pilot stage, others do not yet have a clear decarbonisation pathway.

R&D financing will play a crucial role in enabling development of nascent decarbonisation technologies. **Collaboration** with industry and international cooperation will pool resources, improve identification of R&D priorities, and strengthen knowledge flows. Clarity on research priorities and funding availability will also help incentivise key research. The EIB's InnovFin Energy Demo Projects initiative provides loans, loan guarantees or equity-type financing of EUR7.5-75m to innovative demonstration projects in energy transformation.<sup>24</sup>



## 11. Green public procurement: boost demand for innovative green products.



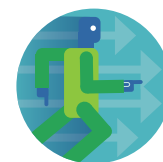
The purchasing power of governments and other public bodies totals around **USD11tn each year**.<sup>25</sup> This is extremely relevant for sectors such as steel and cement, as public procurement represents a large portion of demand for these products, 25% and 40% respectively.<sup>26</sup>

However, while some countries and regions have adopted **green public procurement** (GPP) criteria or guidelines, they remain in most cases voluntary, such as those of the EU and South Korea. These criteria could be gradually replaced with mandatory ones.<sup>27,28</sup>

Using Taxonomy criteria will also ensure consistency of sustainable investments. For example, the US government aims to spend 80% of its procurement funds with suppliers that have set targets for their scope 1 and 2 emissions by 2023. Major suppliers to the US federal government will be required to disclose their greenhouse gas emissions and climate-related financial risk.<sup>29</sup>

## Facilitate investment

### 12. Critical raw materials investment: diversify supply to safeguard transition.



Current growth of decarbonisation technologies could double demand for critical raw materials by 2040, while a net-zero pathway would quadruple demand.<sup>30</sup> Given that, for example, currently 75% of lithium, cobalt and rare earths are produced in three countries, supply chain security is hugely important for the transition.<sup>31</sup>

**Diversifying supply chains** by investing in local supply and development finance for emerging markets will help ensure security of supply. Concerns over supply chain disruption have led governments to adopt a variety of policies to ensure critical raw materials' availability. For example, in March 2022, the Australian government adopted its Critical Minerals Strategy, including over USD1.6bn state aid funding.<sup>32</sup>

In addition, mining has a high environmental impact and urgently needs **sustainable and science-based standards for the extraction and processing of these minerals** as well as standards for the end products that use these materials that evaluate upstream environmental impacts. Use of standards to establish lower tariffs for sustainable materials can encourage global improvements in mining practices.

Governments will also need to fund R&D and facilitate investment in recycling, reuse, and substitution of these minerals to **limit demand** for mining.



### Endnotes

1. Hard-to-abate sectors are those essential industries that will be needed beyond 2050 but whose decarbonisation technologies are not yet developed and/or face significant barriers to implementation: these include steel, cement, chemicals, shipping, trucking, and aviation.
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