COP31 BUSINESS FORUM

Industrial Decarbonization Working Group Paper

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The COP31 Business Forum, established by the Turkish COP31 Presidency, aims to turn climate commitments into investment and implementation, so that climate action, economic growth and shared prosperity advance together.

It works through thematic Working Groups that bring together business representatives from around the world.

This paper is one of seven working group papers of the COP31 Business Forum. Their policy recommendations are summarised and compiled in the COP31 Business Forum Statement, available in full at http://copbusiness.org/. The paper reflects the work undertaken within the relevant Working Group and is intended to inform the development of policy support recommendations for COP31. Unless otherwise stated, the contents should not be construed as the official positions of the Co-chairs, Knowledge Partner or of any individual participating organization. References within the document to existing initiatives, included solely as practical illustrations of what is possible however not to be interpreted as evidence that these recommendations have been implemented, adopted or formally endorsed.

In the Industrial Decarbonization Working Group, business representatives worked together with experts and partner initiatives over three meetings to select priority policy areas, shape and validate the recommendations, and identify the initiatives and illustrative case studies most relevant to implementation, drawing on member surveys and consultations throughout. This paper sets out the recommendations of the Industrial Decarbonization Working Group, together with the evidence and initiatives that support them, and its key messages are reflected in the COP31 Business Forum Policy Recommendations.

23 organizations have expressed support for the five endorsed initiatives featured in this paper, making over 130 offers of support, ranging from sharing technical expertise and promoting the initiatives through their networks to contributing projects, participating in technical working groups and advocating for government engagement.

Industry accounts for more than a quarter of global greenhouse gas (GHG) emissions. Cutting these emissions requires markets that reward low-carbon production, including market-based carbon pricing schemes, as well as the enabling conditions that make new industrial technology bankable. These conditions must include enabling infrastructure, affordable finance, access to technology, a skilled workforce, and stable policy, with transition pathways that reflect each country's starting point.

Voluntary demand for near-zero materials remains too small to move markets, as these materials often carry a price premium of 50%–150%,[1] which most buyers beyond a small group of first movers are unwilling to absorb.

Carbon pricing is just as uneven: 87 direct carbon pricing policies, including emissions trading systems and carbon taxes, are now in force, covering 29%[2] of global emissions, yet China, the United States, and India which together account for a large share of global emissions, have low or fragmented carbon prices.

Carbon Border Adjustment Mechanisms (CBAMs) are necessary as long as carbon pricing schemes remain regional and fragmented globally. The EU is currently negotiating to extend to downstream steel- and aluminium-intensive products for 2028 (around 180 products in the European Commission's proposal)[3]. At the same time, however, CBAM is raising cost and compliance pressures for importers and exposed producers, particularly in emerging markets and developing economies (EMDEs). The Paris Agreement's Article 6 carbon trading mechanisms, meanwhile, opens new decarbonization and carbon trading opportunities for both developed economies and EMDEs, as compliance markets increasingly accept its credits.

The barrier that recurs across net-zero technologies is bankability: carbon capture for cement and steel can cost well over $100 per metric ton[4] of CO_2 once storage and transport are included, depending largely on location and access to storage. And even with a high carbon price, policies that stimulate low-carbon demand and enable net-zero technologies are needed in order to bring the technologies to scale.

Business has concentrated its position on the three areas where government action could change investment decisions directly:

01 **Expanding and strengthening carbon pricing**
02 **Stimulating low-carbon demand**
03 **Establishing net-zero technology enablers**

The three priorities reinforce one another, as carbon pricing provides a durable investment signal, procurement and harmonized standards reward low-carbon production, and net-zero technology enablers make projects bankable. Together, they establish the conditions for industrial decarbonization.

COP31 marks the start of this agenda, and the Business Forum should continue its work beyond the conference to see it delivered. Over the coming year, it should broaden endorsement of these recommendations among companies, associations and governments, support the endorsed and newly proposed initiatives, and most importantly, advocate at the national level for implementation of the recommended policies and track their progress. The ambition is to present early progress in implementation at COP32, alongside a wider base of endorsers and initial results from the newly proposed initiative.

01

Expanding and strengthening carbon pricing

Carbon pricing can deliver industrial decarbonization, provided it is designed to be durable and effective. Jurisdictions introducing an emissions trading system or comparable instrument should follow a balanced approach:

- **Consistent policy frameworks and predictable price trajectories** must give companies confidence to commit capital, with price signals strong enough and sustained over time to make abatement cheaper than continuing to emit and pay
- Domestic **producers must be protected against carbon leakage** from imports produced under lower or no carbon prices, for example through border adjustment mechanisms and linked markets with mutual recognition of carbon prices paid
- Where the price alone does not make the investment case, **effective and balanced government financial support** (for example, carbon contracts for difference) **should close the residual cost gap and de-risk exposures such as price volatility**. These should be financed by recycling a high share of emissions trading revenue into industrial decarbonization and deploying enabling infrastructure, including hydrogen networks, CO_2 transport and storage infrastructure, and industrial connections to these networks.

Applying these principles in more jurisdictions and connecting the resulting systems while supporting the companies most exposed to the transition could turn today's uneven prices into a consistent, international investment signal.

The Working Group suggests that governments should expand and strengthen carbon pricing by:

- extending stable and predictable carbon pricing mechanisms to new geographies and increasing price levels, with price levels in line with respective national climate goals, while:
  - considering the contribution of a defined, limited proportion of Article 6 credits within compliance carbon pricing schemes, with robust accounting, safeguards for domestic abatement, and simplified project criteria
  - ensuring that revenues are reinvested to support industrial decarbonization and enabling infrastructure;
- linking carbon markets and making carbon-pricing systems interoperable through the recognition of carbon prices paid, common MRV[5] and PCF[6] methodologies across domestic and import-related measures, keeping rules simple and harmonized; and
- creating a replicable support mechanism, combining financial and technical assistance, for adaptation of companies in EMDEs to cross-border carbon-pricing mechanisms (incl. the CBAM).

Participation in international carbon markets could serve as a steppingstone toward domestic carbon-pricing systems by strengthening MRV capacities, registry systems, market governance and institutional expertise.

Proposed Initiative: EMDE Transition Support Vehicle

The Working Group proposes a transition support vehicle to identify projects most critical to the competitiveness of EMDE companies exporting to jurisdictions with cross-border carbon pricing mechanisms (incl. the CBAM), and close capacity and financing gaps through concessional financing, targeted advisory, and policy dialogue. As carbon pricing expands, these companies face new costs and compliance requirements and, like companies under established emissions trading systems before them, must build costly monitoring and verification systems, often without domestic frameworks or finance to support them. Developed economies, multilateral development banks and other international financial institutions should provide tailored finance and technical assistance, including for smaller companies, ideally via national platforms that already bring these instruments together. The vehicle's support should extend across industrial value chains, covering supplier readiness, emissions-data capability and project preparation.

Example from Practice

The **EU Innovation Fund** illustrates how a jurisdiction can recycle carbon-pricing revenue into industrial decarbonization. It is financed by auctioning about 530 million EU ETS allowances, which the Commission estimates could draw roughly **€40 billion** in ETS revenues between 2020 and 2030, depending on the carbon price[7]. Jurisdictions that auction emissions allowances can route proceeds into a similar competitive, milestone-based support mechanism. Payouts remain small because money is released only as projects reach milestones such as financial close and entry into operation, but demand is high as the latest call drew 358 applications requesting €17.5 billion against a €2.9 billion budget.[8]

02

Stimulating low-carbon demand

Near-zero materials cost more to make, and too few buyers are willing to pay the green premium to underwrite the significant investment required for decarbonizing production. Public procurement is a critical lever because of its scale and ability to provide long-term demand signals. But contracts are still often awarded on price alone, and making carbon criteria standard in tenders may require changes to procurement rules.

Procurement runs into a measurement problem: Worldsteel mapping[9] has found more than 50 differing carbon-accounting approaches from roughly 80 different organizations for steel, leaving neither buyer nor seller able to specify or prove a low-carbon product. Volume, measurement and contract form must move together. Fixing one but not the others leaves the investment case incomplete.

The Working Group suggests that governments should stimulate low-carbon demand by:

- using public procurement to create markets for low-carbon products;
- turning private and public demand-side pledges into contractable purchase commitments, supported by demand aggregation and public offtake; and
- establishing aligned MRV and product carbon footprint methodologies and ensuring their interoperability across jurisdictions.

Delivery Partners: Demand Coalitions & Accounting Standards

The **First Movers Coalition** (FMC) aggregates private buyers who then pledge a share of annual procurement as near zero and convert those pledges into offtake deals. More than 100 member companies across seven hard-to-abate sectors will account for around $19 billion[10] in reported demand commitments through 2030. Scaling procurement and turning demand pledges into purchase commitments requires support from initiatives already operating in this domain, so **businesses with material procurement in hard-to-abate sectors should consider joining the initiative to push for further decarbonization**.

The **Industrial Deep Decarbonization Initiative (IDDI)** works with governments to create demand for low-emission steel, cement and concrete through green public procurement. Its Green Public Procurement (GPP) Pledge sets out flexible but ambitious pathways for public construction. Governments can begin with a Statement of Intent and commit at the level that best fits their national context. The Business Forum supports national adoption of the GPP Pledge and encourages governments to commit at the most ambitious level feasible for their circumstances. Industry can strengthen implementation by providing verified embodied-carbon data, based on harmonized methodologies, for public tenders. Businesses are also encouraged to share technical expertise with IDDI through its stakeholder community and, where appropriate, through representative industry bodies participating in its technical working groups.

Harmonized standards are essential both to a coherent global architecture for GHG accounting and reporting and to support decarbonization of the value chain. Such architecture depends on high-quality, verifiable, and transferable emissions data. Business and governments should improve data quality and data-sharing infrastructure so that reported information becomes more consistent, auditable, and comparable, duplicative reporting burdens fall, and GHG-related regulations (incl. carbon pricing) can be underpinned by agreed-upon methodologies and robust data.

There are a number of efforts underway in this area. ISO[11] and the GHG Protocol are leading work, under the COP Action Agenda, to update and harmonize their widely adopted product-, corporate-, and project-level carbon accounting standards. Organizations such as PACT[12] have developed methodologies for calculating product carbon footprints, while E-Ledgers and the EFI Foundation have developed ledger-based carbon accounting approaches. Also, CASI[13] has issued guidance on integrated corporate- and product-level accounting, and the ICC[14] and Carbon Measures are developing guidelines for a global carbon emissions accounting system that could support a product carbon intensity standards approach.

Example from Practice

Green public procurement of construction materials is already in force in several geographies, and Thailand shows how an EMDE can build it within existing law. Public procurement accounts for about 40% of national cement consumption. National Green Public Procurement Framework, launched in December 2025, aims for public agencies to spend THB 3 billion (~$89 million) on certified green products in 2026; low-carbon cement is one of nine priority items but remains voluntary. UNIDO guidance proposes making it mandatory through a simple pass/fail threshold of **800kg CO_2e**[15] per metric ton of cement in public tenders, which screens out the most carbon-intensive cement, introduced in phases and applied through the existing e-procurement system and the 2017 Procurement Act. This illustrates how governments can adapt such approach within existing procurement laws, without requiring a new regulator.

03

Establishing net-zero technology enablers

The barrier that recurs across net-zero industrial technologies is bankability. Undeveloped regulation leaves lenders unable to assess long-term risk, hence the need to accelerate it. Even with clear rules, first-of-a-kind projects still carry risk that no single developer can absorb alone, which de-risking instruments address. Shared infrastructure, CO_2 transport, and storage—each of which can also serve CO_2 removal technologies—must be publicly enabled because no single project can build them alone. Regulation, risk sharing, and shared infrastructure have to advance together, as a gap in any one of them leaves a project unbankable regardless of how well the other two are addressed. The same enablers should apply beyond carbon capture, and include raw material efficiency, which reduces the emissions that need to be abated and lowers overall abatement costs.

The Working Group suggests that governments should establish net-zero technology enablers by:

- putting in place clear, technology-neutral permitting and legal frameworks for net-zero technology;
- deploying de-risking instruments for first-of-a-kind and early commercial projects through risk-sharing instruments (incl. insurance, government loan guarantees, and Carbon Contracts for Difference [CCfDs]); and
- building shared, open-access infrastructure.

Delivery Partners: Project Acceleration & Policy Cooperation

The **Industrial Transition Accelerator (ITA)** works with named projects to address the barriers blocking final investment decisions (FIDs). Through the Business Forum, ITA shares insights, based on work on the ground in multiple countries, of the critical interventions (acceleration levers) necessary to support companies through to FIDs in cement, steel, aluminium, chemicals, aviation or shipping sectors—across both members of the Business Forum and parts of their ecosystem. The Business Forum suggests that governments endorse and partner with ITA through individual country programs while addressing the policy barriers ITA's project pipeline identifies.

The **Clean Energy Ministerial CCUS Initiative** brings governments, industry, and finance together to share policy and project experience on carbon capture, utilization and storage (CCUS). It highlights the role of CCUS in wider clean energy discussions—and provides a platform to share various elements of CCUS advancements and business models—through the whole value chain, from capture all the way to permanent storage. The initiative enables its members to learn from each other by providing an active platform for dialogue as they develop CCUS policies, regulations, and business models. Business Forum companies and industry associations aim to engage relevant governments and invite officials into appropriate discussions, injecting their own project experience into these dialogues.

Examples from Practice

Shared transport and storage networks lower the cost and risk of carbon capture for each emitter, **and the UK's CCUS cluster sequencing process shows how governments can plan them**. The state selects industrial clusters, licenses a shared CO_2 network for each, and contracts the capture plants that connect to it, so the whole chain reaches FID simultaneously. The government has committed £21.7 billion over 25 years[16] to the first two clusters, whose storage networks reached financial close in 2024–2025[17]. First operations are scheduled for 2028[18] and capture at Heidelberg Materials' Padeswood cement works (**800,000 metric tons per year**)[19] starting in 2029. Governments with several emitters near suitable storage can follow the same sequence: shared network first, emitter contracts second.

Risk-sharing contracts can also secure the low-carbon fuels that industry will need. Japan's Hydrogen Society Promotion Act gives certified suppliers of low-carbon hydrogen and ammonia 15 years of support covering the price gap with the fossil fuels they replace, from a budget of about ¥3 trillion (around €17 billion).[20] Certified projects include JERA and Mitsui imports of about **770,000 metric tons a year of low-carbon ammonia** from the United States[21], and an IHI-led **chain importing 228,000 metric tons** a year from India, with first supply starting in 2030[22]. The model suits governments with credible industrial demand and a long-term budget to cover the cost gap.



Business can contribute committed demand, credible emissions data, and investable projects. Clear and predictable government policies together with financial and technical assistance, value-chain capacity building and policy support for EMDEs can move these contributions from pilots to scale.

Sources & References

1. IEA (2026), Demand- and Supply-Side Measures for the Industry Transition, policy brief
2. World Bank (2026), State and Trends of Carbon Pricing 2026, World Bank, Washington, DC
3. European Commission (2025), Proposal for a Regulation amending Regulation (EU) 2023/956 to extend the scope of the CBAM to downstream products, COM(2025) 989, 17 December 2025 (procedure 2025/0419(COD))
4. BloombergNEF (2023), CCUS Market Outlook 2023: Announced Capacity Soars by 50%
5. Measuring, reporting, and verifying
6. Product carbon footprint
7. European Commission, "What is the Innovation Fund," climate.ec.europa.eu
8. European Court of Auditors, Special Report 11/2026, Innovation Fund – High potential, but slow progress and little impact on emissions reduction (March 2026)
9. worldsteel (2024), GHG methodology mapping, World Steel Association; Steel Standards Principles
10. World Economic Forum (2026), How the First Movers Coalition helps drive decarbonization
11. International Organization for Standardization
12. Partnership for Carbon Transparency
13. Carbon Accounting Standards Initiative
14. International Chamber of Commerce
15. UNIDO, Guidance for Mandatory Public Procurement of Low-Carbon Cement in Thailand, Industrial Deep Decarbonization Initiative (IDDI), 2026
16. UK Government, funding announcement for the HyNet and East Coast CCUS clusters, October 2024
17. Northern Endurance Partnership and Net Zero Teesside Power, financial close announcement, December 2024
18. Carbon Capture and Storage Association, East Coast Cluster case study, 2026
19. Heidelberg Materials, Padeswood carbon capture final investment decision, press release, September 2025
20. Ministry of Economy, Trade and Industry (METI), price-gap support under the Hydrogen Society Promotion Act, in force October 2024
21. S&P Global Commodity Insights, "Japan certifies JERA-, Mitsui-led ammonia projects under yen 3 trillion price-gap subsidy", December 2025
22. IHI Corporation and UBE Corporation, "Large-Scale Low-Carbon Ammonia Supply Chain Plan Certified under Japan's 'Support focusing on the price gap' scheme", press release, 30 June 2026

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- Akbank
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- Alagan Tech
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- American Petroleum Institute
- Anglo American plc
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- Antalya Ticaret Borsası
- APP Group
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- Aslı Tekstil Giyim Sanayi ve Ticaret A.Ş.
- Assan Alüminyum
- Baker Hughes
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- BKV Corporation
- Carbon Measures
- CDP Türkiye / Sabancı University Corporate Governance Forum
- CEM CCUS
- Çimsa
- Climate Champions Team
- Climate Leadership Coalition
- Climeworks
- Confederation of Danish Industry (DI)
- Dalmia Bharat
- Denizli Sanayi Odası
- Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
- Eczacıbaşı Topluluğu
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- ENERCON
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- ERM
- Eurochambres
- European Bank for Reconstruction and Development (EBRD)
- Evonik Industries
- ExxonMobil
- First Movers Coalition (FMC)
- Garanti BBVA
- Climate Knowledge Initiative, Columbia University
- Global CCS Institute
- Global Cement and Concrete Association (GCCA)
- Greenhouse Gas Protocol (GHG Protocol)
- GSK
- Hamburg Chamber of Commerce
- Hamburger Recycling Turkey Atık Yönetimi A.Ş.
- HDI Sigorta A.Ş.
- Heidelberg Materials
- Holcim
- Hydrogenix
- IC Holding
- ICC Brasil
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- İMEAK Deniz Ticaret Odası
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- ISO (International Organization for Standardization)
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- Svante Inc.
- T.C. İklim Değişikliği Başkanlığı
- Technical Expert Panel on Carbon Accounting – ICC and Carbon Measures
- TITAN Group
- TOBB (Türkiye Odalar ve Borsalar Birliği)
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- Ülker Bisküvi Sanayi A.Ş.
- UN Global Compact Türkiye
- UNEP (United Nations Environment Programme)
- UNIDO (United Nations Industrial Development Organization)
- Unilever
- United Airlines
- Ussal Consultancy
- Vale
- Veirano Advogados
- Veolia
- We Mean Business Coalition (WMBC)
- World Bank Group
- World Bioenergy Association
- World Business Council for Sustainable Development (WBCSD)
- World Climate Foundation
- World Steel Association (worldsteel)
- YASED Uluslararası Yatırımcılar Derneği


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