



WRI INDONESIA

Setting the context for the guiding session, MISFF 2026

Why is decarbonization becoming a competitive necessity for Indonesian industries?

Jakarta, 30 June 2026

WRI Indonesia is an independent research organization that works with governments, businesses, multilateral institutions, and civil society groups to develop practical solutions that improve people's lives and ensure nature can thrive in Indonesia.

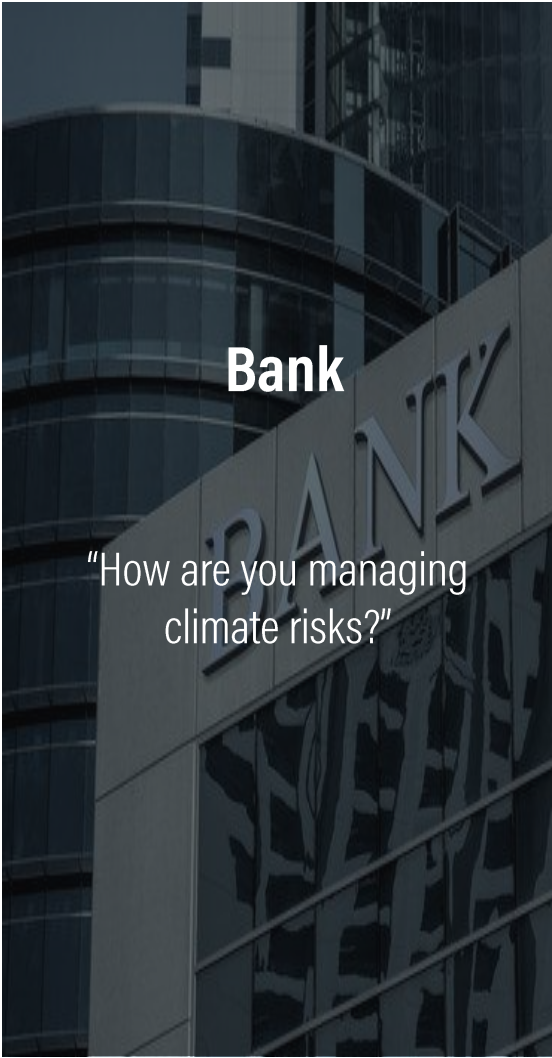
WRI Indonesia was legally established as a foundation (Yayasan) in 2014.

We organize our work around seven important issues:

- Food, Land, and Water;
- Climate, Energy, Cities and Transportation, and Ocean



Do these questions sound familiar?

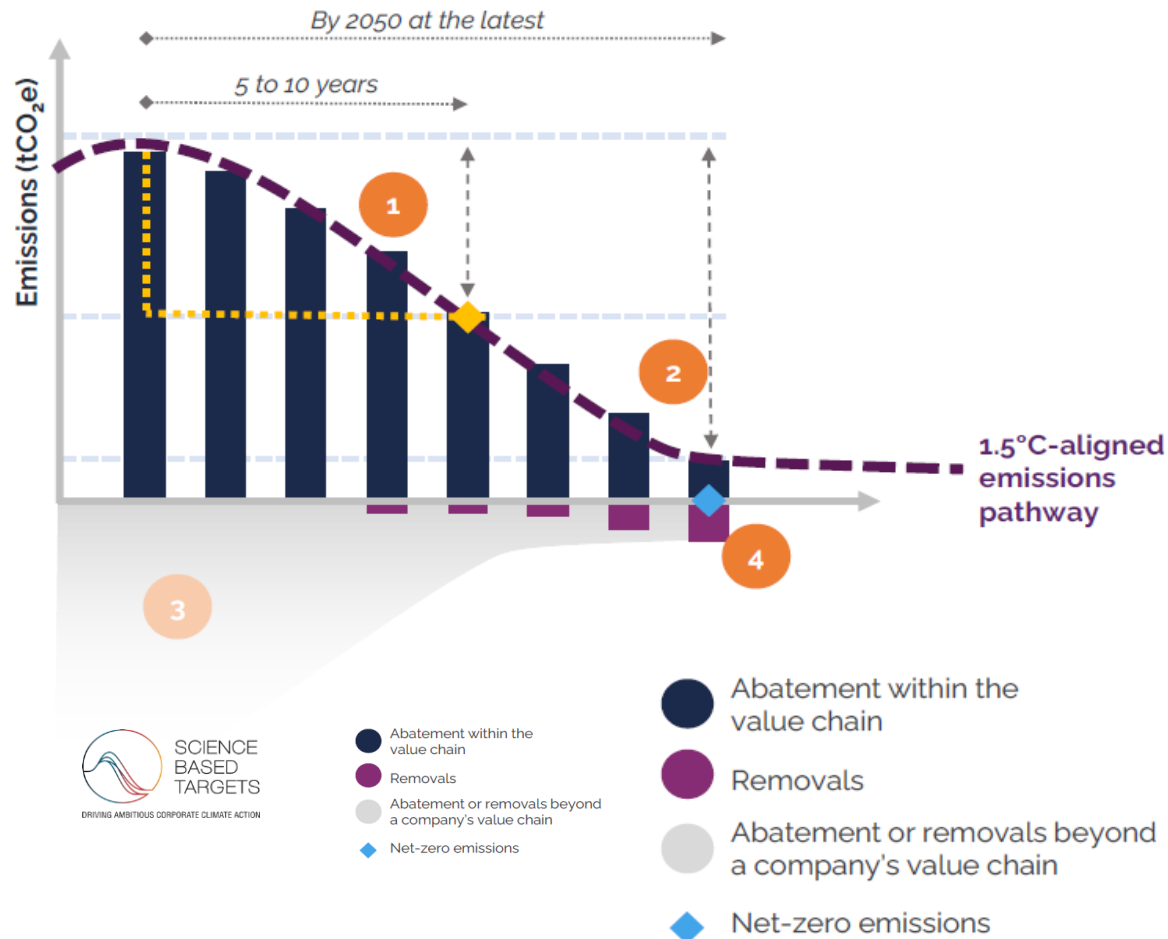


Four business trends are reshaping the business landscape, making decarbonization increasingly important for long-term competitiveness



What does decarbonization mean for industry?

According to the Science Based Targets initiative (SBTi), decarbonization is a long-term business transformation journey that prioritizes emissions reduction over carbon removal and offsets



1. Abate by 2030

Set near-term science-based targets:

5-10 year emission reduction targets in line with 1.5°C pathways

2. Abate ambitiously

Set long-term science-based targets:

Target to reduce emissions to a residual level in line with 1.5°C scenarios by no later than 2050

3. Neutralize to support societal net zero

Beyond value chain mitigation:

Companies may invest in additional climate mitigation during the transition, e.g. purchasing high-quality, jurisdictional REDD+ credits or investing in direct air capture (DAC) and geologic storage

4. Neutralize to achieve corporate net zero

Neutralization of residual emissions:

Use permanent carbon removals only for emissions that cannot be eliminated

To achieve emissions reductions, companies can combine multiple decarbonization levers based on their operational needs and technology maturity

Industrial decarbonization pillar



Energy and Material Efficiency

Reducing energy and material consumption while maximizing value for optimal output.

Example: Waste heat recovery, machine performance efficiency.



Fuel and Material Replacement

Substituting primary energy and material sources with low-carbon alternatives.

Example: Switching from diesel to biofuels, or from natural gas to hydrogen



Process Improvement

Modernizing technologies or production methods with low-carbon alternatives.

Example: Replacing BF-BOF with DRI-EAF technology.



Low-Carbon Power and Electrification

Transition to electricity generated from renewable energy sources.

Example: Solar PV power plant installations.



Carbon Capture, Utilization, and/or Storage (CCUS)

Capturing carbon dioxide from point sources to be reused in processes or stored for long-term sequestration.

Example: CCU or CCS.



Carbon Removal from the Atmosphere (Offsets)

Capturing carbon dioxide that has already been released into the atmosphere for reuse or long-term storage.

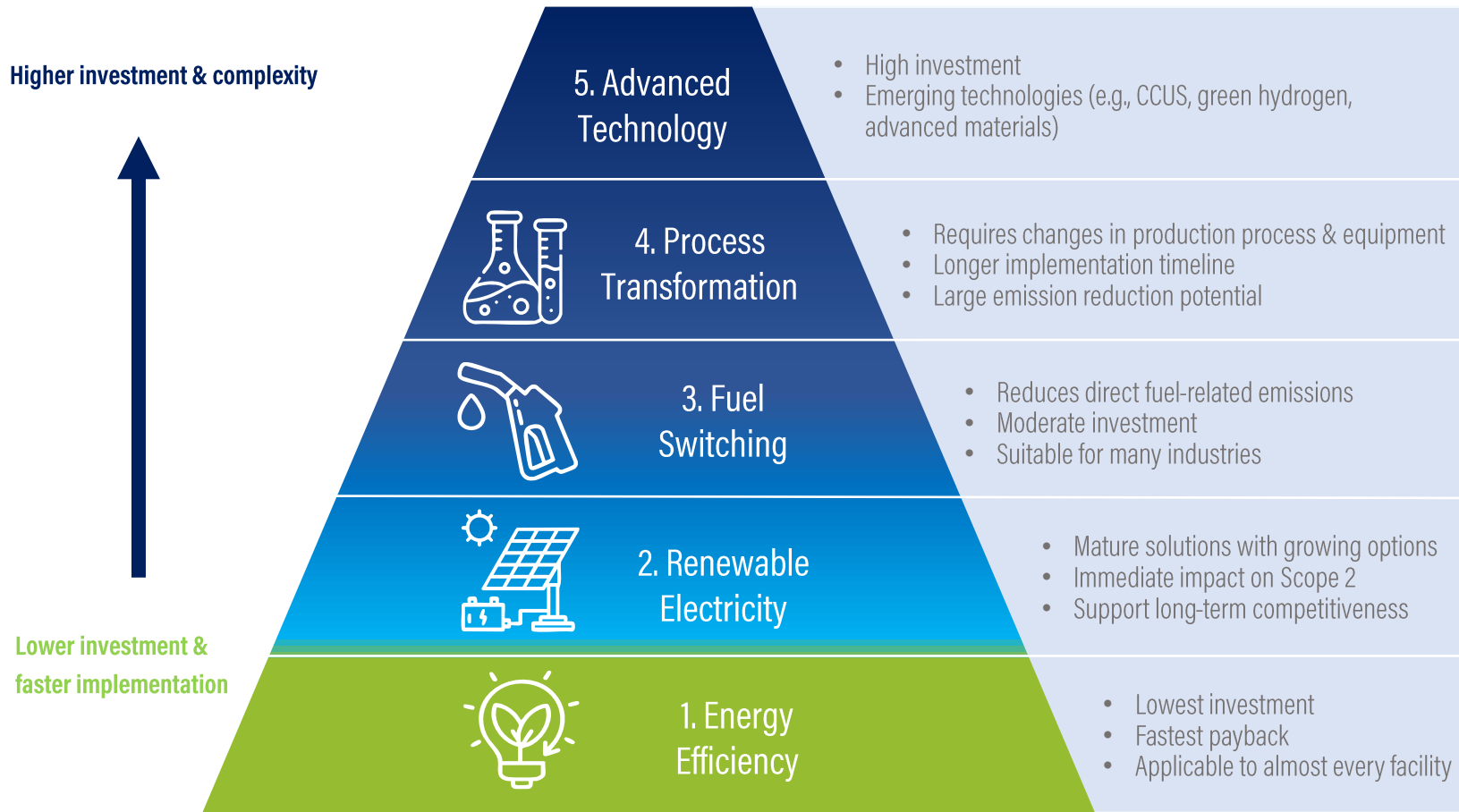
Example: Direct air capture (DAC), nature-based solutions (NBS), geological storage.

Abatement or Emissions reduction

Emissions neutralization

But where should industries start?

Start with quick wins, then move toward deeper transformation



Which emission are reduced?

Mapping of levers to emission scopes

Decarbonization lever	Primary scope impacted
1. Energy Efficiency	1 2
2. Renewable Energy	2
3. Fuel Switching	1
4. Process Transformation	1
5. Advanced Technology	1

* Depending on a company's value chain and emissions boundary, these measures may also contribute to Scope 3 emission reductions.

Understanding the scopes

1

Direct emissions from owned or controlled sources

2

Indirect emissions from purchased electricity, steam, heating or cooling

3

Other indirect emissions across the value chain (upstream & downstream)



Start with what is practical and impactful today, and build toward a comprehensive long-term decarbonization strategy

Indonesia has the foundations to accelerate industrial decarbonization (1/2)



Push Factor #1: Strong national policy support for decarbonization

Indonesia's national government has established a clear climate ambition, supported by an expanding set of policy instruments to enable industrial decarbonization:

Indonesia's
Climate Target

31.89%

Unconditional
emission reduction

43.2%

Conditional
emission reduction


2060
Reach Net Zero



New Ministry of Industry's Industrial Decarbonization Roadmap, provides sectoral emission reduction pathways & guidance for industrial transition.



New Presidential Regulation No. 110/2025 on Carbon Economic Value (Nilai Ekonomi Karbon), includes general carbon pricing mechanism, carbon tax, carbon market, & cap-and-trade.



New OJK regulation & product on sustainable finance includes green taxonomy & mandatory sustainability reporting



Push Factor #2: Increasing investor interest in clean energy and industrial transition

Global and domestic financial institutions are increasingly mobilizing capital and tools to support the transition:



Mobilized Sustainable Financing
USD 38.8 Billion in 2025

And plan to mobilize twice by 2030



Supported financing for the 60 MW Saguling floating solar power plant.



Supported green Shariah financing for the procurement of Electric Dump Trucks in the mining services sector.



Assesses clients' emissions intensity and alignment with its 2050 decarbonization pathway through the Net Zero Carbon Calculator.

Indonesia has the foundations to accelerate industrial decarbonization (2/2)



Push Factor #3: Growing ecosystem of private sector initiatives and coalitions

The private sector is increasingly mobilized through collective action and voluntary commitments that accelerate decarbonization:



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The Asia Clean Energy Coalition (ACEC) convenes a coalition of global renewable energy buyers, in collaboration with sellers and financiers, to strategically shift policy in key Asian national and regional markets.



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A private sector coalition to voice out companies' clean energy demand to policy makers and to enable a diverse clean energy solutions



Key partners: KADIN INDONESIA SINAR MAS WWF WRI INDONESIA

KADIN Net Zero Hub mobilizes support and provides guidance to companies on their decarbonization journey toward net zero in Indonesia.



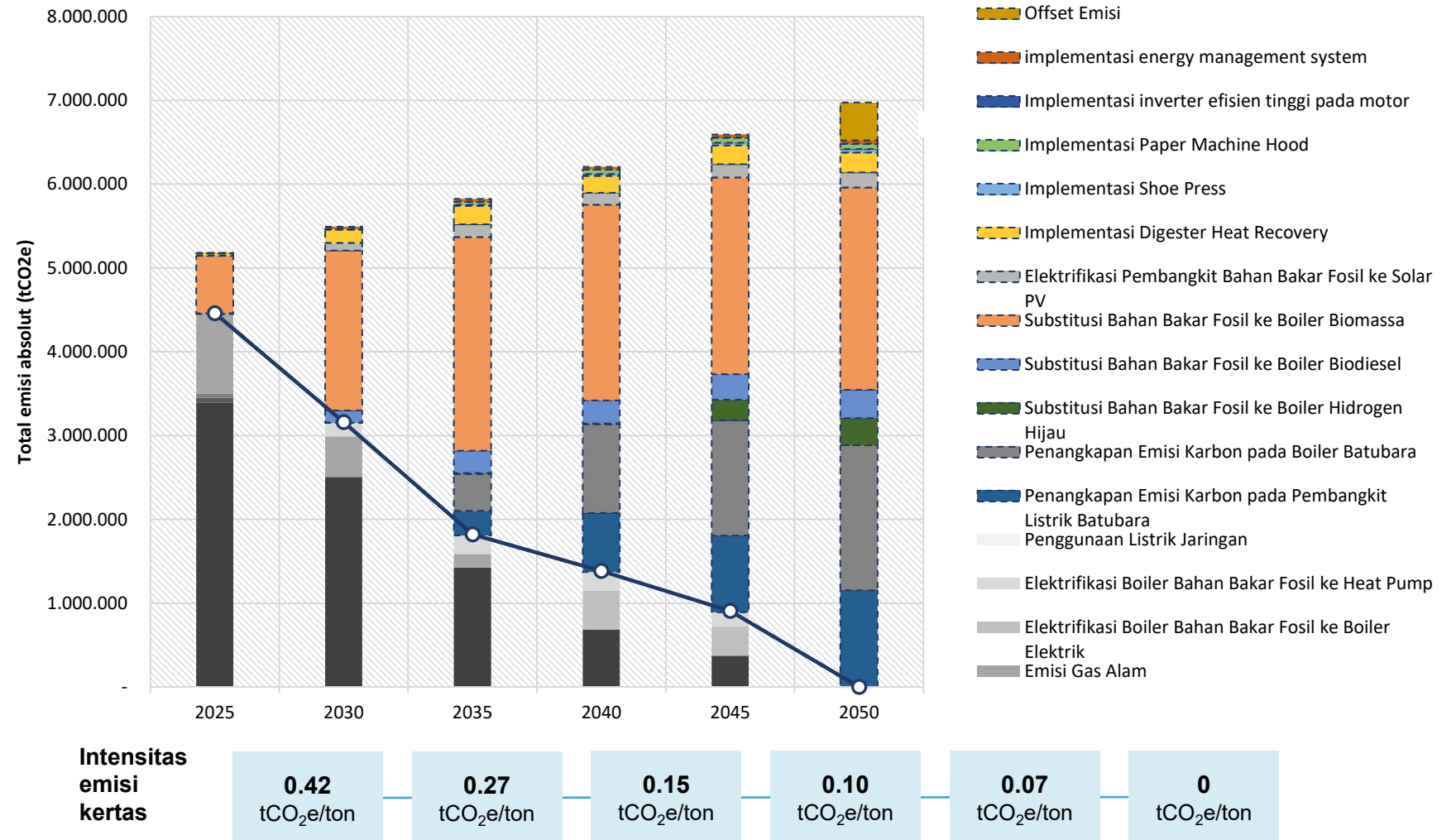
Industrial Decarbonization Roadmap provides sector-specific transition pathways for nine industrial subsectors, including technology options, emission reduction pathways, and investment needs



Access the interim documents (executive summary and booklet) by scanning the QR code below:



GHG Emissions Reduction Trajectory for the Integrated Pulp and Paper Subsector



Beyond reducing emissions, pursuing decarbonization can help companies reduce costs, strengthen market access, attract investment, and improve resilience



Decarbonization improves operational efficiency through lower energy and resource consumption, helping companies reduce costs and strengthen long-term profitability.

Potential impacts:

29% of company executives have seen **bottom-line savings** from climate action initiatives.



Companies with credible decarbonization targets can strengthen brand reputation and better meet customer demand for low-carbon products and services.

Potential impacts:

79% of company executives reported **improved brand reputation**.



Decarbonization signals strong climate governance and risk management, increasing investor confidence and access to sustainable finance.

Potential impacts:

52% of company executives reported **increased investor confidence**.



Decarbonization helps companies anticipate regulatory changes and build resilience against evolving climate-related risks and policies.

Potential impacts:

35% of company executives reported **greater regulatory resilience**.

Business Value in Practice:

Examples of proven decarbonization initiatives that deliver measurable business value

INITIATIVE 1

Industrial Energy Efficiency



EXAMPLE

Schneider Electric uses digital energy management and smart factory solutions to improve energy efficiency across its global manufacturing operations

Business Impact



Reduce operating costs

Digital energy management has enabled energy savings across many industrial facilities, with some implementations reporting energy reductions of up to 30%.



Shorter payback period

Many industrial energy efficiency projects achieve payback within one to two years, depending on the technology and operating conditions.



Improve productivity

Better energy management reduces downtime and improves operational performance.



Lower emissions

Reduced operational emissions through lower energy consumption



Highlight: Schneider Electric has achieved carbon-neutral operations and continues to reduce operational emissions in line with its net-zero roadmap to 2050.

INITIATIVE 2

Waste-Based Biomass for Clean Heat



EXAMPLE

Multi Bintang Indonesia uses waste-based biomass from agricultural residues and by-products to generate renewable thermal energy for brewing operations.

Business Impact



Lower carbon emissions

- Biomass replaces fossil fuels in boilers, reducing Scope 1 emissions.
- In 2023, MBI reduced its Scope 1 and 2 emissions by 58% compared with its 2022 baseline



Cost and energy security

Using locally sourced agricultural by-products (e.g., rice husk, cassava peels) reduces dependence on fossil fuels and helps manage energy price volatility.



Circularity aspect

Agricultural residues are converted into clean heat, while the resulting ash is reused as organic fertilizer, creating additional value from the same resource



Local value creation

Creates additional value for agricultural residues while strengthening local biomass supply chains



Highlight: Agricultural residues with little or no economic value can become a valuable source of renewable energy, reducing fossil fuel use while strengthening circular resource use



Key takeaway: Companies can begin their decarbonization journey with proven, commercially viable solutions that deliver measurable business value before progressing toward more advanced technologies



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