Carbon Market Watch: Indonesia Launches Emissions Trading in 2025

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Indonesia is ushering in a new era of climate policy in 2025 with the launch of a mandatory emissions trading scheme (ETS). This carbon market framework – a cap-and-trade system integrated with carbon credit offsets – is a cornerstone of Indonesia's strategy to meet its climate commitments. Backed by recent regulations, the ETS imposes greenhouse gas emission caps on key industries, starting with power generation and expanding to others in phases. Companies will now face hard limits on emissions and have opportunities to trade carbon allowances, all under government oversight. This newsletter-style insight explains the legal basis of Indonesia's carbon market, how the new ETS is structured, what sectors are affected first, and what businesses need to do to comply and capitalize on the carbon trading system.

Legal Framework and Climate Commitments

Indonesia's carbon market rests on a robust legal foundation aimed at achieving the country's climate targets. Presidential Regulation No. 98 of 2021 on the Implementation of Carbon Economic Value provides the umbrella framework for carbon pricing instruments, including emissions trading, to help reach Indonesia's nationally determined contribution (NDC) under the Paris Agreement. This landmark regulation, issued in late 2021, signaled Indonesia's shift from a purely voluntary carbon market to a compliance-based market by establishing a **"carbon economic value" (nilai ekonomi karbon)** mechanism. It set the stage for

detailed rules on carbon trading, a national registry, incentives, and carbon levies or taxes – many of which have since been fleshed out by ministerial regulations.

Crucially, the carbon market is tied to Indonesia's broader climate goals. Under its enhanced NDC, Indonesia committed to cut greenhouse gas emissions by 32% below business-as-usual levels by 2030 (or up to 43% with international support). The government has also articulated a long-term aspiration to reach net-zero emissions by **2060**. The new ETS is one of the policy tools designed to achieve these targets by putting a price on carbon and encouraging emissions reductions across the economy. By capping emissions and enabling trading, Indonesia aims to curb pollution in line with its NDC while driving investment into cleaner technologies, ultimately bending its emissions trajectory toward the 2060 net-zero vision.

The legal framework for the ETS has been progressively detailed since 2021. In October 2022, the Ministry of Environment and Forestry (MoEF) issued Regulation 21/2022 as guidelines for implementing carbon economic value across sectors, covering carbon trading procedures, offset use, monitoring and verification, and institutional roles. This was followed by sector-specific rules, such as the Ministry of Energy and Mineral Resources (MEMR) Regulation 16/2022 in December 2022, which established the basis for emissions trading in the power generation sector. Meanwhile, Indonesia's Financial Services Authority (OJK) rolled out Regulation No. 14/2023 to set up a national carbon exchange, leading to the launch of the **"IDX Carbon"**trading platform in late 2023. Together, these regulations operationalise the Presidential Regulation's mandate, creating the infrastructure for a carbon market that becomes fully active in 2025.

Cap-and-Trade Structure with Offsets

At the heart of Indonesia's carbon market is a **cap-and-trade scheme** that sets emission limits on regulated entities and allows trading of emission allowances. The government determines an emissions cap (or performance standard) for each covered facility – initially in the power sector – and issues tradable allowances corresponding to that cap. In Indonesian regulation, these allowances are known as *Persetujuan Teknis Batas Atas Emisi Pelaku Usaha* (PTBAE-PU), essentially technical approvals for emission limits per business acto. Facilities that emit less than their allowance can bank the surplus or sell it, while those that exceed their cap must buy additional allowances or eligible credits to cover the difference. This creates a financial incentive to reduce emissions: companies that cut emissions below their target can profit by selling excess permits, whereas those who emit above their allocation incur extra costs

Indonesia's ETS is designed as an **"intensity-based" cap-and-trade** in its initial phase, particularly for power plants. Instead of an absolute tonnage cap, power generators are given emissions intensity targets (tons of CO_2 per MWh) appropriate to their plant type and capacity. These intensity benchmarks translate into the number of free allowances allocated per unit of electricity output.

For example, a large coal plant might be allotted an intensity of 0.911 tCO_2 per MWh in the first phase, and it receives allowances accordingly. If it operates more efficiently and emits less per MWh, it will have spare allowances to trade; if not, it will need to obtain extra units. While intensity-based, this system effectively acts as a cap, ensuring sector emissions stay within an overall limit. Notably, in the first year all allowances were allocated 100% free to ease companies into the system, with plans to reduce free allocations (e.g. to 75–85%) in subsequent years to increase the role of auctioning and trading.

Carbon offset credits are integrated into the trading scheme as a compliance flexibility. Businesses can use certified emission reduction credits – known domestically as **Sertifikat Pengurangan Emisi Gas Rumah Kaca (SPE-GRK)** – to meet part of their obligations. These carbon credits stem from approved projects that reduce emissions (for instance, renewable energy installations or energy efficiency projects). Under current rules, only credits from certain sectors (energy, transport, industry, and other energy-related activities) and registered in the national system can count toward compliance. There is no quantitative limit yet on the use of offsets, but all credits must be verified and issued through Indonesia's National Registry System for Climate Change Control (SRN-PPI). By allowing offsets, the ETS becomes a **hybrid system** – companies under the cap-and-trade can purchase carbon credits to offset a portion of their emissions, providing compliance flexibility and a revenue stream for projects that cut emissions outside the capped sectors. This integration ensures that Indonesia's carbon market not only constraints emissions in regulated industries but also stimulates broader mitigation activities through a domestic offset market.

Phased Rollout by Sector

Indonesia is taking a phased approach to rolling out its ETS across different sectors. The power generation sector was the first to enter the scheme, given it's one of the largest sources of emissions. In Phase 1 (2023–2024), the ETS covered 99 coal-fired power plants connected to the national grid, representing about 81% of Indonesia's power capacity. These were primarily large coal plants (≥100 MW capacity) owned by the state utility PLN and a few private producers. The government set output-based emissions intensity caps for these plants, as noted earlier, and initiated trading among them. This initial phase served as a trial-by-fire for the trading mechanism, following a smaller pilot in 2021 that had already familiarised power companies with carbon trading and offset use. By the end of 2024, the coverage had grown to 63 companies across 146 power installations as more units were brought in.

From **2025 onward, the program enters Phase 2**, expanding its scope within the power sector. The plan for **Phase 2 (2025–2027)** is to include additional fossil-fueled power plants: not only larger off-grid (captive) coal plants, but also gas-fired and gas-engine power plants connected to the grid. In practical terms, this means dozens of gas turbine and combined-cycle plants will join the ETS by 2025, on top of remaining coal plants that weren't in the initial phase.

By Phase 3 (2028–2030), the ETS will encompass all significant fossil fuel power generators in Indonesia – including smaller diesel and gas plants down to a certain capacity threshold. Each phase is expected to tighten the emissions benchmarks, ratcheting down allowable emissions per MWh to drive greater reductions over time. The phased rollout within the power sector gives companies time to adapt and invest in efficiency upgrades while steadily expanding coverage to ensure no major emitters are left unregulated.

Heavy industry in action. Sectors like steel and cement are slated to join Indonesia's cap-and-trade programme in coming years as the carbon market expands beyond power generation.

Beyond power, Indonesia is laying the groundwork to bring **industrial sectors** into the carbon market. The government has identified four high-emitting industries as next in line: **cement, fertiliser, steel, and pulp & paper** manufacturing. These sectors are significant sources of CO_2 from fuel combustion and industrial processes. According to officials, a mandatory cap-and-trade system for these industries is planned to **launch by 2027**, following ongoing preparations in 2025 and 2026. Policy details are expected to be announced by August 2025, including setting sectoral baselines and allocation methods. Early indications suggest that industrial emitters will be assigned carbon allowances (quotas) and those exceeding their quotas must purchase permits from more efficient peers, with a small portion of any excess emissions incurring a direct fine. The aim is to have the entire manufacturing sector covered by cap-and-trade by 2030, by which time even harder-to-abate industries will have to either cut emissions or buy credits. Other sectors like **forestry, agriculture, and waste management** could see emission caps in the future as well, especially since MoEF has hinted at eventually implementing caps in those areas too. In the interim, uncapped sectors can still participate through the **offset mechanism**, generating carbon credits (for example, forestry projects can earn credits for the ETS or voluntary market). This phased, multi-sector rollout ensures the carbon market's impact will progressively broaden, aligning more of Indonesia's economy with its climate objectives.

Compliance Obligations for Companies

For businesses brought into Indonesia's ETS, compliance hinges on rigorous monitoring, reporting, and verification (MRV) of emissions and adherence to trading rules. Each regulated company must monitor its greenhouse gas emissions (primarily CO_2, but also methane and nitrous oxide as relevant) and report them annually via the national climate registry, SRN-PPI. The data reported – whether tons of CO_2 emitted or mitigated – undergoes verification by accredited independent verifiers and approval by the relevant ministry (e.g. MoEF for cross-sector data). Only with verified emissions data can a company determine its compliance position: whether it has surplus allowances or a shortfall. The government's MRV framework, first trialed in the power sector and being extended to others, is thus the backbone of integrity for the carbon market. Companies are expected to maintain robust internal systems to accurately measure fuel use, process emissions, and any reductions, in line with the methodologies set by regulators.

Once emissions are verified, the **compliance cycle** works as follows. By the end of each period (likely yearly), a company must surrender a number of allowances equal to its verified emissions. Power plants receive their allotment of PTBAE-PU allowances upfront; industrial firms in future will similarly be allocated or auctioned allowances. If a company's emissions exceed the allowances it holds, it faces a compliance gap. To bridge this gap, the company can **trade** on the carbon market – purchasing additional allowances from other companies that have excess, or buying eligible offset credits. All trades are conducted through the appointed carbon exchange (or via direct bilateral deals registered in SRN-PPI) to ensure transparency. Indonesia's sole carbon exchange to date is the **IDX Carbon platform**, operated by the Indonesia Stock Exchange, which became operational in September 2023. Through this exchange, businesses can post offers to sell or bids to buy carbon units, with prices determined by supply and demand. The exchange also handles the issuance of credits and allowances into accounts and their retirement for compliance, interfacing with the national registry.

Non-compliance is met with financial penalties – Indonesia's system is explicitly a "cap-tax-and-trade" hybrid. This means that if a company fails to surrender enough allowances or credits to cover its emissions, it will be liable for a **carbon tax** on the excess emissions. The carbon tax was introduced by Law No. 7 of 2021 on Harmonization of Tax Regulations, which set a baseline tax rate of IDR 30 per kg CO_2 (around US$2 per ton). Implementation of the tax was deferred to align with the ETS timeline, and is now expected to kick in from 2025 as a backstop. In practice, authorities have indicated that only a small fraction of any excess emissions (for instance, 5%) might be directly taxed or fined, but the remaining 95% overage would still require the company to purchase allowances to make up the difference. This approach ensures that paying a tax is not a cheaper way out — the company still must abate or buy credits for the bulk of its excess pollution.

Additionally, companies that do not participate actively in trading (e.g. refusing to buy needed credits) can face administrative sanctions such as reduced future free allowance allocations. In short, compliance is not optional: firms must diligently track their emissions, report them, acquire and trade allowances as needed, and settle any shortfall or face monetary consequences. Early action and sound carbon management, therefore, are in each company's self-interest to avoid penalties under this new regime.

Opportunities and Risks for Businesses

The launch of emissions trading in Indonesia brings both opportunities and compliance risks for businesses. On the opportunity side, companies that can reduce emissions below their allotted cap stand to **monetise their carbon savings**. For example, a power producer that over-achieves on efficiency or a cement factory that upgrades to lower-carbon processes could end up with surplus allowances. These can be sold to other emitters, turning carbon cuts into revenue. Similarly, firms outside the capped sectors (or those with additional reduction projects) can generate certified carbon credits and sell them into the market. The government expects a robust market for credits – including those from renewable energy or forestry projects – as the ETS matures, which could bring significant financial inflows. In fact, Indonesia opened its carbon exchange to **international buyers** in January 2025, allowing businesses to export carbon credits overseas in approved cases. This means companies that develop high-quality carbon projects could attract global buyers, especially as Indonesia has abundant potential in sectors like forestry for offset generation. There is also an **incentive for early movers**: industries that adapt quickly may gain a competitive advantage, both by lowering their operating costs (through energy efficiency) and by branding themselves as greener, which can appeal to investors and customers increasingly focused on ESG (Environmental, Social, Governance) criteria.

On the other hand, the new carbon market introduces compliance **risks and costs** that businesses must manage. For emitters in regulated sectors, there is now a **price on carbon** – effectively an added cost of production for each ton of CO_2 emitted beyond the free allocation. Companies with carbon-intensive operations (e.g. coal power plants, steel mills) could face increased operational costs if they need to buy a lot of allowances or pay carbon taxes. This creates a risk to profitability, especially in sectors where it may be difficult in the short term to reduce emissions. Moreover, regulatory risk looms: the rules of the carbon market will continue to evolve (for instance, benchmarks tightened, more sectors added, or fewer free allowances over time). Businesses must stay abreast of these changes or risk non-compliance by ignorance. **Failure to comply** – whether by not reporting emissions, misreporting, or not surrendering sufficient credits – can result not only in the carbon tax penalties described but also reputational damage. Companies caught out as heavy polluters or as non-compliant could face public and investor scrutiny. There is also market risk: carbon credit prices might rise over time as caps tighten, making compliance more expensive for those who delay action.

Another risk is the challenge of measurement and verification – companies will need to ensure their emissions data is accurate and third-party verified. Any discrepancies or fraud in reporting can lead to sanctions and undermine the credibility of their carbon reductions. Finally, for businesses that are not yet covered by the ETS but likely will be (such as manufacturers slated for 2027), there is a strategic risk in not preparing early. Such companies might find themselves scrambling to retrofit plants or source cleaner energy at the last minute when the cap-and-trade rules hit their sector. In summary, Indonesia's carbon market rewards proactive companies that reduce emissions and engage in trading, but it will penalise laggards. Businesses should view carbon constraints as the new normal and plan investments accordingly – whether that means upgrading equipment, shifting to renewable energy, or purchasing offsets to hedge their compliance position.

Conclusion: Preparing for Carbon Trading Compliance

- Indonesia's 2025 launch of emissions trading marks a pivotal shift in corporate environmental accountability. The writing is on the wall: carbon emissions now carry a price tag, and regulatory scrutiny will only increase as Indonesia strives to meet its 2030 and 2060 climate goals. Businesses, especially those in energy and industrial sectors, would do well to **review their emissions data and strategies immediately**. A first step is to ensure robust internal MRV systems – accurate tracking of energy use and emissions is essential for navigating the carbon market. Companies should also explore their options to improve efficiency or adopt cleaner processes to minimise the need to buy allowances. Many firms are finding that investing in emissions reductions (through technology upgrades or operational changes) can be cheaper in the long run than purchasing credits year after year.
- It is equally important for businesses to **engage with the carbon market early**. This could mean participating in training or pilot programs on carbon trading, familiarising staff with how to use the SRN-PPI registry and IDX Carbon exchange, and even executing small trades to learn the ropes. Early experience can pay off once compliance obligations fully kick in. Companies might also identify opportunities to generate their own offsets – for instance, a manufacturer could install a solar PV system or support a reforestation project to earn carbon credits that offset its factory emissions. These actions can turn a compliance exercise into a potential profit centre.

Finally, given the multifaceted regulations and the high stakes, businesses should consult legal and environmental advisors to ensure full compliance. Legal advisors can help interpret the latest government regulations (which may span several ministries and evolve year by year), assist in setting up internal compliance protocols, and advise on transactions like carbon credit contracts. Environmental consultants can help identify emission reduction projects and navigate the technical process of verification and credit issuance. By taking these preparatory steps, companies will not only avoid the risks of non-compliance – they can seize the opportunity to thrive in Indonesia's new carbon-constrained economy. In short, 2025 is just the beginning of Indonesia's carbon market journey; now is the time for businesses to get ready, get competitive, and contribute to a lower-carbon future under the rules of this emerging system

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