TransitionAsia
ACCELERATING EAST ASIAN CORPORATE CLIMATE ACTION

NEW JAPANESE ETS COULD SET HIGHER STANDARD FOR EAST ASIA, IF DONE RIGHT

Each of East Asia's leading polluters has a unique ETS mechanism, but all lack regulatory enforcement needed to drive true emissions reduction

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KEY TAKEAWAYS

- Japan's proposed ETS misses its opportunity to be a high ambition tool to hold corporations accountable for their part in national emissions reduction
- Japan borrows elements from South Korea and China's mandatory schemes, but largely seems to let industry take the lead
- Overall, emissions trading allows for action avoidance and offset-reliance, and is not an adequate tool for decarbonisation without high regulatory oversight, ambitious corporate targets, and mandatory participation to realise carbon price discovery.

EMISSIONS TRADING OVERVIEW

The concept of putting a price on emissions has been around for decades, as mandated in the 1997 Kyoto Protocol. Since then, countries have developed differing approaches and ambition to market-based carbon reduction efforts, with varying degrees of impact and interest from stakeholders. And in 2021, the importance and functionality of emissions trading were demonstrated when the European Union (EU) announced that it would align the cap of its emissions trading system (ETS) with a net-zero pathway.[1] On top of this, the EU proposed a carbon border adjustment mechanism that may have tariff and import implications on products that are not subject to adequate carbon pricing, which is expected to incentivise countries to adhere to the EU's standard.

In East Asia, which accounts for one-third of the world's emissions, there is little cohesion in carbon market methods.[2] Since its launch in 2015, South Korea has one of the largest and most established ETSs in the world (albeit not yet net-zero-aligned). China, on the other hand, is managing the largest market in the world by separating into a national market (launched in 2021), which only covers the power sector, and eight regional markets (some in operation since 2013) which includes all other sectors. Finally, Japan is following suit and launching a carbon market of its own in April 2023.

JAPAN'S RECENTLY ANNOUNCED ETS PILOT

In early 2022, Japan's Ministry of Economy, Trade and Industry (METI) and Japan Exchange Group (JPX) came together to create the GX League, meaning 'green transformation', in an effort to achieve Japan's 2030 and 2050 emissions reduction targets and increase its climate competitiveness as others in the world become more emissions-conscious. One of the main goals of the GX League is to introduce an ETS that will be operated and regulated by the Tokyo Stock Exchange (TSE).

1 https://chinadialogue.net/en/climate/the-first-year-of-chinas-national-carbon-market-reviewed/#:~:text=The%20national%20ETS%20was%20announced,Shanghai%20Environment%20and%20Energy%20Exchange.
2 https://www.worldbank.org/en/region/eap/brief/climate-and-development-in-east-asia-and-pacific-region#:~:text=East%20Asia%20and%20Pacific%20is,of%20the%20world's%20coal%20consumption.

Mid- or long-term effectiveness would hinge on mandatory participation and alignment beyond the pilot scheme

In the first registration window for the ETS, 440 companies making up nearly 28% of Japan's greenhouse gas (GHG) emissions declared that they would join the initiative. These companies make up most of Japan's industry leaders in each sector.[3] The GX League published proposed rules in September 2022, and has since reopened the registration window for additional companies to join, with plans to reassess the proposed rules in fall 2022 and finalise them by the end of the year.

In the meantime, Japan's ETS began a trial period on the TSE in September 2022, where the 145 currently registered participants can trade existing J-Credits (voluntary, over-the-counter credits introduced in 2013), and aren't subject to additional constraints.[4] Prices have reached close to USD23 per tonne in trading thus far (low compared to EU's mature market USD60-80, but high compared to China's USD6-8), and the government appears to be closely monitoring and reviewing the trial in preparation for the full GX League launch in April 2023.

Companies that would like to participate in the ETS will voluntarily set reduction targets for 2025, 2030, and 2050, and will likely receive an emissions quota from any reduction that goes beyond a linear 2050 net-zero trajectory. The government is also considering separate permissible target setting in-line with government designed 'transition roadmaps' for harder to abate sectors (steel, chemicals, cement, etc.).[5]

Aligning these voluntary targets with the government target (46% reduction by 2030) is still voluntary, with no near-term plans of mandating alignment. Additionally, the government does not plan to have a penalty for not reaching targets in the near-term, but notes that it could be an option in the mid- or long-term after the pilot is well underway.[6] Although its ability to enforce and impose penalties on private companies that fail to meet targets in the future is unclear.[7]

Voluntary participation, voluntary target setting, voluntary 2030-alignment with the national target and no penalties for missing corporate targets leaves much to be desired in this initiative that has the potential to expedite corporate progress. These elements are disappointing but unsurprising given Japan's current carbon tax that is far too low to drive industrial transformation of markets like green steel.[8]

One potential area for impact is that disclosure will be managed with the establishment of 'the GX Dashboard', which will be open to external stakeholders and will show commitments and progress of participants.

The Role of Emissions Trading

Transition Asia does not believe emissions trading to be as effective of a solution to corporate decarbonisation as more direct decarbonisation strategies that focus on pure emissions reduction and investing in the energy transition. Existing mechanisms allow highly polluting companies and nations to take advantage of the monetisation of carbon and continue business-as-usual by 'eliminating' their emissions through purchased credits.

3 https://gx-league.go.jp/member
4 https://www.reuters.com/business/sustainable-business/japan-starts-carbon-credit-trading-trial-tse-2022-09-22/
5 Based on conversations with METI
6 Ibid.
7 https://www.meti.go.jp/policy/energy_environment/global_warming/GX-league/gxleague_concept.pdf
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A COMPARATIVE LOOK AT REGIONAL EMISSIONS TRADING MARKETS

In analysing Japan 's newly proposed market rules, we look at neighbouring markets of China and South Korea to review pros and cons of their existing ETSs.

China

Market activity is on the rise despite drawbacks concerning ambition and market incentives

China separates its carbon trading activities between a national market and eight regional markets. For the purposes of this comparison, we will focus on the national market. The national market launched in 2021 and only includes the power sector, although it is comprised of over 2,000 emitters making up around 40% of China's total carbon emissions.[9] And despite only including the power sector, it is the world's largest market by a significant margin.[10] Regulators aim to expand it to include seven other sectors by 2025 to make up around 60% of the nation's total, although there have already been delays in incremental milestones.[11]

The market is mandatory, but benchmarks are unambitious and allocations of excess allowances too generous to create incentives to decarbonise. As mandatory markets can result in too much, too soon for some companies, regulators are allowing one or two compliance cycles to pass in order for all companies to become familiar with having a target to meet and developing a strategy to meet it, and to prevent windfall profits from large companies that can transfer resources between subsidiaries.[12]

The market is not open to foreign investment, and there are no clear plans of which additional sectors will be added at what time and how that will affect liquidity in regional markets, sending confusing signals to investors. China's system also stands out from others by basing the allocation of emissions allowances on emissions intensity, rather than the more common absolute cap approach, which focuses on emissions reduction per unit of GDP, allowing companies to increase emissions alongside production volume - thus effectively removing much incentive to get serious on emissions reduction.

In its first year of operation, China's national carbon market has seen low trading volume (USD1.25 billion in its first year compared to USD36.7 billion in the EU's ETS for the same period) with a low price of carbon (USD8 per tonne at 2021 year-end. In comparison, the EU's ETS fluctuates between ~USD60-90 per tonne over the last year).[13][14] Credibility has also been brought into question, further alienating potential investors, after the Ministry of Environment and Ecology (MEE) announced that four auditing companies were falsifying carbon emissions data of companies.[15] However, market activity has recently increased, and the initiative has been viewed favourably for raising emissions reduction management knowledge amongst participants.

9 https://chinadialogue.net/en/climate/the-first-year-of-chinas-national-carbon-market-reviewed/#:~:text=The%20national%20ETS%20was%20announced,Shanghai%20Environment%20and%20Energy%20Exchange.
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Strong attributes like mandatory reporting and wide coverage are hampered by disjointed and changing market management

South Korea

South Korea launched the first national mandatory ETS in East Asia in 2015, which includes approximately 700 of the countries' largest emitters (determined by set metrics), making up nearly 75% of national emissions.[16] It is seen as East Asia's most developed ETS, with carbon prices reaching around USD30 per tonne.[17] Reduction targets are determined on a sector-by-sector basis based on the central government's '2030 Basic Roadmap for Achieving the National GHG Mitigation Target', which mostly fall between a 20-30% reduction rate.

The ETS follows most other markets in the world, including the EU's, in determining the allocation of emissions allowances based on an absolute cap. But it is unique to the majority of other ETSs in its inclusion of indirect emissions from electricity use, mainly due to high government control of electricity prices that hinders pass-through costs of carbon. Such inclusion is uncommon as it is conducive to double-counting of emissions that serves to manipulate the market in periods of economic growth or recession.[18]

It has been restructured a few times since its inception, with the management of the system passing back and forth between government ministries, and allocating responsibilities amongst additional sectoral ministries each covering a specific emission type. This disjointed oversight has caused a great deal of confusion and market scepticism for participants.[19]

In comparison to China's national system, South Korea was well prepared for target management and tracking, as it had an established Target Management System (TMS) since 2012 and required mandatory annual reporting of emissions reduction targets from select high-impact companies.

Table 1 - Comparing Japan's proposed ETS mechanism with the neighbouring markets of China and South Korea

High-Ambition ETS Features	China (National market)	South Korea	Japan (Proposed)
Open to all market participants	×	✓	✓
Mandatory	✓	✓	×
Emissions allocation based on an absolute cap	×	✓	TBD
Global investor access	×	✓	✓
Regular review of mechanism	✓	✓	✓
Phase-in process for market stability	✓	✓	✓
Ambitious corporate targets (at least government pledge-aligned)	×	×	TBD
Likely to reach IMF's USD75 per tonne price target by 2030[20]	×	✓	TBD

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17 https://asia.nikkei.com/Opinion/South-Korea-s-carbon-market-a-model-for-the-rest-of-Asia
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JAPAN'S WAY FORWARD

Mandatory market is crucial in driving meaningful climate action

Current carbon prices in Asia are too low to influence the behaviour of top polluters, due to weak regulation and inadequate pricing instruments, but mandatory participation is a necessary step toward progress.[21]

Strong ETS policies go hand in hand with other carbon reduction-focused policies like a high carbon tax and strategic subsidies to create a carbon price that drives industrial transformation.[22] These elements are imperative to the market developing in a way that provides price predictability and adequate liquidity that will allow the price of carbon to reach levels that provide market-based incentives for capacity-scale decarbonisation efforts.

As Japan eases into its ETS launch, making participation in the GX League mandatory will be a crucial step in market development to ensure clear incentives for emissions reduction. Voluntary markets are failing to achieve emissions reduction potential as they do not allow for adequate market price predictability, and for carbon pricing to play the role it is meant to, it needs all relevant buyers and sellers so price discovery can occur.[23]

The government has announced that it will transition into 'full scale' emissions trading by 2026, requiring specific companies to participate. It is unclear what 'full scale' means in terms of coverage or targets. But it has noted that it will create a plan for a carbon pricing system to fund its green transition, including the implementation of wider carbon pricing, albeit gradually so companies do not move production abroad.[24]

While we recognise that an adjustment period is necessary for companies to update their targets and strategies to meet expectations, the final rules of the ETS and other carbon policies need to require national alignment to Japan's 2030 and 2050 emissions reduction goals, in addition to a mechanism for the government to penalise companies that do not reach their respective targets. A well-managed mandatory market that requires alignment with the government's 46% reduction by 2030 target is sure to have reverberating effects throughout Japan's energy grid, carbon policies, and industrial transformation, and holds the potential to usher in large-scale decarbonisation for all Japanese corporations and the country as a whole.

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ABOUT TRANSITION ASIA

Founded in 2021, Transition Asia is a Hong Kong-based non-profit think tank that focuses on driving 1.5°C-aligned corporate climate action in East Asia through in-depth sectoral and policy analysis, investor insights, and strategic engagement. Transition Asia works with corporate, finance, and policy stakeholders across the globe to achieve transformative change for a net-zero, resilient future. Visit transitionasia.org or follow us @transitionasia to learn more.