



# IETA WHITE PAPER ON CHINA'S NATIONAL ETS

JUNE 2016



**IETA**  
CLIMATE CHALLENGES  
MARKET SOLUTIONS

## EXECUTIVE SUMMARY

IETA strongly welcomes the development of China's national emissions trading system (ETS). At its launch in 2017 China's ETS will become the world's largest emissions trading system and it will strongly assist China in meeting its 2030 carbon intensity goal. IETA congratulates the National Development and Reform Commission (NDRC) for its hard work on designing the national ETS based on best practice and drawing on the experience of other jurisdictions with an ETS, **This paper aims to address several policy details in the national ETS and provide recommendations based on IETA and its members' +15 years of experience with emissions trading.** Our main recommendations to ETS policymakers in China are as follows:

- IETA recommends that the NDRC set national rules and guidance for MRV, cap setting, allowance distribution and CCER offset use for all provinces, municipalities and special-administrative zones to follow.
- Foreign entities with deep and varied experience from participating in ETSs around the world should be a welcome addition to the national ETS.
- Adopt a robust accreditation system for independent verifiers based on strict technical parameters and able to ensure high environmental integrity standards for the ETS.
- To boost market participation and liquidity, IETA recommends that the national ETS should also allow for forward carbon trading.
- IETA believes the NDRC has set a high standard for transparency through reporting the 'annual status of carbon emissions and settlement of allowances for each key entity,' but verified emissions data should also be included in the disclosure of the "status of carbon emission and compliance.
- Grandfathering is a useful tool when phasing-in an ETS as it encourages companies to participate, but benchmarking is a more preferred allocation tool over time.
- IETA believes that Chinese financial market regulators should continue to encourage the involvement of (international) participants in the growth of both the more established listed derivatives trading and the emerging OTC derivatives infrastructure for legitimate and robust carbon price discovery and hedging by Chinese ETS market participants.
- IETA would recommend not to "designate" a particular exchange(s) as the platform for trading national allowances, as this could limit competition among exchanges/platforms. We would encourage the NDRC to apply common infrastructure across the exchanges to support transaction settlement and delivery of rules governing the emissions exchanges.
- IETA recommends that the use and eligibility criteria of CCERs for compliance purposes should be aligned among provinces to ensure a level playing field. We also recommend that NDRC should confirm the exact eligibility criteria of CCERs under the national ETS as soon as possible and include and account for the reductions that occur from CCER projects in the overall reduction target under the ETS cap.

# CONTENTS

IETA's Emissions Trading Principles	3
IETA's Emissions Trading Guidance	3
Section 1: Monitoring Reporting & Verification	4
Section 2: Foreign Participation	4
Section 3: Ensuring Harmonisation of Rules	5
Section 4: Allocation	5
4.1 Free Allocation	5
4.2 Grandfathering	6
4.3 Benchmarking	6
4.4 Auctioning of allowances	7
4.5 Timing of auctions	7
Section 5: Market Products	8
Section 6: Market Transparency	8
Section 7: Trading	9
Section 8: CCERs	9
Section 9: Early Action	10

## IETA'S EMISSIONS TRADING PRINCIPLES

Emissions trading is one of the principal policy instruments available to manage industrial greenhouse gas (GHG) emissions by encouraging operational excellence and the deployment of new and existing technologies. Emissions trading is effective because:

- It is economically efficient.
- It is specifically designed to deliver an environmental objective.
- It delivers a clear price signal for low carbon emission investments and operations.

A central objective of climate change policy should be the efficient direction of capital within the market towards low and zero carbon emission investment. To achieve this objective, an effective emissions market requires:

- A cap on the number of emission allowances that is low enough to create a price signal, but high enough to avoid insufficient supply or price spikes;
- Long-term clarity and predictability of rules and regulations; and
- Effective policing of rules and regulations.

In the longer term, the market should grow and evolve when economically efficient to provide wide sectorial GHG coverage, and link with other ETS's to globally to promote a carbon price.

## IETA'S EMISSIONS TRADING GUIDANCE

IETA aims to ensure that system design, implementation and review deliver a functioning and efficient market. We believe there are several key aspects to achieve this which could help China in the implementation of its national ETS. These include:

- Robust and transparent GHG **monitoring, reporting and verification** processes with adequate policing to ensure accuracy.
- **Harmonisation** of rules and allocation approaches to ensure fairness and promote liquidity through simplicity. This is assisted by **transparent reporting** of installation allocation and emissions to build confidence in the system.
- A fair and **equitable allowance allocation** process that incentivises and rewards best practice while avoiding the potential for windfall profits.
- **Robust trading infrastructure and reporting** that facilitates deep and liquid trading enabling true price signals to form.
- **An offset mechanism** that incentivises real, additional, permanent and verifiable emission reductions by sectors or entities without compliance obligations under the ETS and follows an oversight system that ensures no double-counting of reductions takes place.
- Measures to encourage **liquidity** to enable markets to operate efficiently, e.g. exchanges must as a clearing house to remove any counterparty risk and limit administrative burden on compliance entities.

- Ensuring that the ETS is delivering a specific environmental objective (i.e. the cap) and will not be overlapped by other renewables or energy efficiency policies which could undermine the effectiveness and performance of the ETS.

Below we have listed IETA's views on how various elements of the national ETS design can be strengthened. Our views have been informed by our ETS principles and guidance listed above and these views on the national ETS have been developed in tandem with IETA's +130 member companies.

## SECTION 1: MONITORING REPORTING & VERIFICATION

Effective systems for monitoring, reporting and verification (MRV) of emissions are at the heart of ensuring the environmental integrity of an ETS and for this reason are the backbone to any ETS. Different protocols for monitoring emissions have been used in different systems. Emissions can be monitored either directly via continuous monitoring systems (CMS) which are very accurate but costly to set up or through the ability, but not obligation, to use of default emissions factor. These can be useful options to keep costs low while generating an unbiased emissions estimate for entities unable to establish CMS systems.

Reporting arrangements need to be transparent and can build on existing data collected on energy production, fuel characteristics, energy use patterns, industrial output, and transport. Independent verification of emissions reports is often considered essential to the credibility of an ETS. Further collection, monitoring, reporting, and verification of activity data (e.g., tonnes of clinker or steel produced) allow for cross-checks and provide flexibility to adopt different approaches to allowance allocation.

The (typical) importance of independent verification demands that the process for accrediting independent verifiers also be robust. While international standards for accrediting verifiers can be leveraged, governments may sometimes need to supplement these with additional checks on verifier capacity, especially in the early stage of an ETS. The rigor of the verification process may depend on the existing regulatory culture, although most jurisdictions have favored a more stringent regime, sometimes with a commitment that the government itself covers the verification costs of entities.

**IETA recommends the adoption of a robust accreditation system for independent verifiers based on strict technical parameters and able to ensure high environmental integrity standards for the ETS.**

## SECTION 2: FOREIGN PARTICIPATION

IETA recommends that **foreign entities with deep and varied experience from participating in ETS's around the world should be a welcome addition to the national ETS.** Participation by vetted and experienced foreign entities will only serve to increase the success of the pilot & national emissions trading schemes, boost liquidity & promote investments in CCER projects.

IETA recommends that including **international market participants with experience from participating in ETSs around the world should be a welcome addition to the national ETS.** Participation by vetted and experienced international market participants will serve to increase the success of the pilot and national emissions trading systems, boost liquidity and promote investments in offset (CCER) projects.

Based on the experience of China's own provincial pilot programs and the new Korean ETS, China should avoid the mistake of confining carbon trading to compliance companies only. Qualified investment banks (with FICC desks) and other financial institutions (including foreign banks and financial institutions) should be allowed, with clear rules, to participate in spot-trading of national ETS allowances, as well as in any auctions approved by the NDRC. In other ETS's compliance companies rely on these specialised financial firms to develop and implement carbon asset management strategies and provide additional liquidity to the carbon trading marketplace.

Foreign entities could also provide experiences and support in dealing with CO2 risk strategy--especially in the light of the upcoming reform of the power market. Indeed, with a progressively less-regulated power market in China, compliance companies will have to deal with both their power sales and the associated CO2 costs.

**IETA recommends that foreign entities should be a welcome addition to the national ETS. Participation by foreign entities, particularly those with trading and experience from compliance with other ETS programmes, will only serve to accelerate the development of, boost liquidity in and promote investments in CCER projects, which will together increase the likelihood of the success of the pilot and national emissions trading systems.**

## SECTION 3: ENSURING HARMONISATION OF RULES

Harmonisation of the National ETS across China's provinces and municipalities is essential to support a deep and liquid market and enabling a true price signal to form. IETA supports the NDRCs intention to have nationally-set rules for cap setting and allocation that are transposed to each of the different localities. Harmonisation of system definitions, reporting, monitoring and verification, free allocation, allowance surrender and registry functioning is key. This ensures that similar installations throughout China are treated in a similar way and avoids the potential for adverse impacts to the current status of competition between administrative regions and cities which could result in carbon 'leaking' between provinces for no environmental benefit.

**IETA recommends that the NDRC set national rules and guidance for MRV, cap setting, allowance distribution and CCER offset use for all provinces, municipalities and special-administrative zones to follow.**

## SECTION 4: ALLOCATION

### 4.1 FREE ALLOCATION

Free allocation may be the preferred allocation method due to simplicity, however in time this should be adjusted to take into account risks of carbon leakage.

Establishing a national ETS creates new challenges: how to achieve meaningful emissions reductions while sustaining economic growth and also not disadvantaging companies that can be deemed to be emissions intensive and trade exposed (EITE)?

In existing ETSs, free allocation has been given out to installations to reduce the competitive impact of the costs they bear under the system. If the carbon price can be passed on to consumers (e.g. little competitive exposure to imports where carbon is not priced into the finished product) then free allocation is not justified. In the EU the marginal cost of electricity included the price of carbon. Since there are also almost no imports of electricity into the EU, free allocation was restricted and then abolished for electricity generators and competing industrial generation sources of electricity.

**In designing free allocation methodologies, IETA recommends that the following key design principles should be prioritised:**

- **Providing sufficient free allocation based on real production levels to ensure industry is not disadvantaged compared to its competitors who are currently not subject to a price on emissions.**
- **Rewarding, rather than penalising, firms who have been ‘early movers’ in investing in low GHG technologies and plan to expand their efficient business in the future.**
- **Encouraging firms to invest in low GHG technologies and providing incentives to reduce emissions further.**

The objective here, is not to compromise China’s overall objective of reducing emissions via over allocation, nor to compensate for loss of profits or asset values, but to avoid the economic and environmental costs of having firms in these industries contracting more than, or failing to expand as much as they would in a global carbon market or pricing system where all competitors faced similar costs.

## 4.2 GRANDFATHERING

Getting allocation wrong has the potential to undermine both the efficiency and effectiveness of the national ETS. Allocation based purely on historical emissions has the potential to create both ‘windfalls’ and ‘disadvantages’ if allocation levels are too high or low.

Generally it is considered that this risk is highest when free allowances are based on historical emissions (grandfathering). This was most evident in the first phase of the EU ETS where significant over allocation based on data uncertainties, projection-based allocation and generous allocation provisions led to price collapse in 2006 and 2007.

Early actions in emission reductions and early movers may also face disadvantages if they implemented abatement measures before the start of the ETS compliance period. It is also difficult to account for new entrants or plant expansions. **IETA believes grandfathering is a useful tool when phasing-in an ETS as it encourages companies to participate, but benchmarking is a more preferred allocation tool over time.**

## 4.3 BENCHMARKING

When allocation is based on benchmarking or on actual output, allowances relate more directly to actual needs and performance in terms of emissions. Through using a benchmark approach, flexibility is provided to account for natural variations in production rates and plant maintenance cycles as well as the potential start up or expansion of new facilities. Under benchmarking, when production increases or decreases so will allocation--without the risk of windfall gains or unintended under-allocation. Companies that have taken actions before

the ETS to reduce their emissions intensity will benefit relative to those with high emissions intensity; and early actions are rewarded.

**IETA supports benchmarking as the preferred allocation method in emissions trading systems.**

## 4.4 AUCTIONING OF ALLOWANCES

Auctions provide a minimum amount of market liquidity and can facilitate price discovery, especially in cases where liquidity is otherwise limited by significant amounts of banking of allowances by those who receive free allowances which is likely to be the case in the early years of the national ETS.

**IETA supports auctioning as the most efficient way of allowance distribution.**

## 4.5 TIMING OF AUCTIONS

If auctioning is pursued, conducting relatively frequent auctions will help provide transparency and a steady price signal to participants and consumers, and could reduce carbon price volatility. Frequent auctions mean that the value for sale at each individual auction is reduced, decreasing the risk of manipulation of the auction itself and making it more difficult for any one participant to gain too much market power in the secondary market.

In general, IETA recommends that auctions are distributed evenly over the year. The aim should be to achieve the highest liquidity possible. Hence, there is no intrinsic reason to auction the same amount of allowances in each month. In the EU ETS, a reduction in auction volumes in December is recommended due to lower participation in auctions at that time of year because of holidays. China may consider a reduction around the Spring Festival holiday.

The price in the auction could be linked to the price trading in the spot market (e.g. start price is the average of the past quarter). In the EU ETS there is currently an undisclosed reserve price which is a function of the spot price. If there are insufficient bids that meet the reserve price, the auction does not clear.

Alternatively, the California/Quebec carbon market has a very transparent floor price made public for each year when the action calendar is published. Our understanding of the Guangdong auction is that it starts at 80% of the settlement price. This is resulting in market participants just waiting for auctions to commence and does not drive liquidity in the spot market whatsoever.

Auction statistics should be transparent: For example, statistics on the types of bidders, figures on demand, etc. should be made public after each auction and not only as a monthly summary. Greater formalisation of such statistics would be in the interest of overall market transparency. Visibility on the demand curve behind the marginal auction clearing price could also help compliance entities in understanding market trends in order to manage their price risk.

Non-compliance market participants should also participate in auctions as well. IETA encourages the NDRC and local DRC's to extend auction participation to high quality intermediaries (i.e. banks, trading houses, aggregators) as well. This can further improve liquidity in the auctions and the functioning of the overall market. Intermediaries can play an important role in markets where there are many smaller participants and



help ensure market integrity. Such participants are often unable to easily participate in an auction process further raising their costs. Through enabling a framework for intermediary's to participate in auctions on behalf of their clients, smaller entities can more simply acquire smaller numbers of allowances often at lower costs. However, IETA does not believe that individuals should be permitted to participate in emissions trading on the emissions exchanges.

**In a number of ETS's auction revenues are redirected for climate change related purposes as in the case of the EU ETS. IETA believes that best practices from the use of auction revenues should be incorporated into the design of the national ETS.**

## SECTION 5: MARKET PRODUCTS

In many countries with an ETS already in place, over the counter ("OTC") derivatives trading and clearing in the energy sector, among others, plays an important role in helping industrial producers and end users in hedging price risks. Since the financial crisis in 2008, global OTC derivatives markets have gone through fundamental changes. In China, the last two years have demonstrated great efforts by investment banks, futures brokerage firms and other stakeholders to pioneer commodity OTC derivatives trading.

Adding some derivative instruments to a carbon market can provide risk management by a global diversification in financial instruments that helps to hedge different positions against production fluctuation. The second benefit of derivatives is price discovery by giving the possibility to consider in real time all information that influences the market.

To assure counterparties of delivery, performance risks and credit risks, the Exchange should implement a central clearing house; either act as a central counterparty themselves or in partnership with an existing OTC clearing house. The Shanghai Clearing House already does this for other commodities and would be a natural fit for carbon trading. For carbon derivatives contractual design, IETA recommends that China follow European and North American examples by adopting a regular-size contract (i.e., 1,000 tons per contract). Mini-contracts (100 ton per lot, for instance) should be avoided to deter retail speculation.

**IETA believes that Chinese financial market regulators should continue to encourage the involvement of (international) participants in the growth of both the more established listed derivatives trading and the emerging OTC derivatives infrastructure for legitimate and robust carbon price discovery and hedging by Chinese ETS market participants.**

## SECTION 6: MARKET TRANSPARENCY

IETA recommends that the NDRC disclose relevant rules with respect to coverage, allocation and necessary information that enable an entity to fully comply with its potential obligations under the national ETS. The timing of this disclosure should be sufficient to allow the compliance entity time to prepare itself for its obligations under the ETS.

**IETA believes the NDRC has set a high standard for transparency through reporting the 'annual status of carbon emissions and settlement of allowances for each key entity,' but verified emissions data should also be included in the disclosure of the "status of carbon emission and compliance."** This information helps to

build confidence in the scheme and thereby promotes engagement in the market. Wherever possible, backdating of compliance obligations to a retrospective date should be avoided. The objective of a national ETS is to provide a forward price signal that allows entities to respond and alter their choices and behaviours. Failure to project this price signal and exposure with enough forward information promotes inefficient outcomes, erodes business confidence and fails to preserve fair competition among peers, sectors and nations.

We also recommend that contract settlement must be aligned across the pilots systems and under the national system across all exchanges. Spot contracts should settle at T+1 to ensure timely exchange of units (Allowances and CCERs) and funds.

## SECTION 7: TRADING

All seven pilot ETS's have gained valuable operating experience over the past several years, with varying degrees of success. After the NDRC launches the national ETS in 2017, the seven pilot markets could be allowed to continue to function and compete freely for the trading of national allowances and CCERs, without undue restriction. Ultimately, market forces will drive the restructuring of these spot exchanges through possible mergers and acquisitions. The surviving exchanges become much stronger and more efficient in serving compliance companies. In Europe, traders could buy and sell EUAs and CERs on at least two competing spot exchanges. In Europe, traders can buy and sell EUAs and CERs on at least two spot exchanges and, as between these exchanges, traders have the comfort in knowing that they each applied a basic minimum level of harmonized transaction rules and settlement processes (e.g. the transfer and settlement rules for EUAs were the same whichever exchange trading platforms for rules, settlement, margining, platform designs (matching based they went to). Regulators in Europe did not stipulate that EUA spot transactions must occur on a "designated" exchange, and there is competition between the two exchanges.

**IETA would recommend not to "designate" a particular exchange(s) as the platform for trading national allowances, as this could limit competition among exchanges/platforms. We would encourage the NDRC to apply common infrastructure across the exchanges to support transaction settlement and delivery of rules governing the emissions exchanges.** The NDRC could also refine rules to boost transparency and governance of these exchange operators. For instance, by requiring them to disclose financial information quarterly or semi-annually, setting up independent risk committees, etc.

From the start of the EU ETS, forward carbon trading resulted in over 80% more liquidity than a spot-only market. **To boost market participation and liquidity, IETA recommends that the national ETS should also allow for forward carbon trading.** Forward carbon trading allows entities to take into account the future cost of carbon on investments they need to make today. The trading of both spot and over-the-counter (OTC) carbon units on the forward market will encourage liquidity on the emissions exchanges.

## SECTION 8: CCERS

**IETA fully supports the NDRC's intention to allow carbon-emitting entities to offset a part of their compliance obligations with CCERs.** From a compliance entity perspective, access to offsets provides a valued source of flexibility in meeting compliance expectations by providing access to a greater set of cost-effective mitigation opportunities.

The use of offsets allows for aggregate emissions from covered sources to exceed the cap, but the overall emissions outcome is unchanged as the excess emissions are offset by the emissions reduction credited by the offset. They can also provide economic, social, and environmental co-benefits, including better air quality, restoration of degraded land, and better watershed management. When this aligns with policy priorities, for instance to support low income rural and agricultural areas they can be particularly advantageous.

When designing an approach to using offsets in an ETS, important considerations include whether to limit their use, vintage, geographic location, and methodological requirements. **IETA believes that robust offsets that are proved to be real, additional, permanent and verifiable should not be unduly constrained.**

**In considering such restrictions IETA recommends that the use and eligibility criteria of CCERs for compliance purposes should be aligned among provinces to ensure a level playing field. We also recommend that NDRC should confirm the exact eligibility criteria of CCERs under the national ETS as soon as possible and include and account for the reductions that occur from CCER projects in the overall reduction target under the ETS cap.** Otherwise, investor confidence may erode and threaten the incentives for both project developers and market participants to purchase and finance primary offset projects within China.

## SECTION 9: EARLY ACTION

One key aspect of the national ETS that China should consider carefully is the recognition of early action by firms to reduce their carbon emissions prior to implementation of the ETS. Relatedly, China should take steps to ensure that firms cannot obtain a larger allocation of Emissions Reduction Quotas (ERQs) by ramping up their carbon emissions prior to implementation. Recognizing early action is important for aligning firms' incentives with the ETS program. Firms that have undertaken early action should be rewarded, rather than punished, for doing so. Conversely, firms that have not reduced emissions should not benefit from their inaction.

+++++

To conclude, we thank Chinese policymakers for their tremendous effort in developing a national ETS, and hope that our views and recommendations will help support and strengthen their efforts.

Should you have any questions on this paper, please contact:

Jeff Swartz, Director-International Policy:  
[swartz@ieta.org](mailto:swartz@ieta.org)

