TAIWAN: LAYING THE FOUNDATION FOR A CARBON MARKET

Taiwan is set to join the growing number of countries with an emissions trading system. Hui-Chen Chien, Robert Shih and Wen-Cheng Hu look at the foundations being laid for Asia's next ETS and the prospects for engagement with the international carbon market

After nine years of deliberation, the government of Taiwan passed the Greenhouse Gas Reduction and Management Act finally in mid-2015. The Act sets a long-term target to reduce Taiwan's GHG emissions to 50% below 2005 levels by 2050, as well as eventually establishing a cap-and-trade system.

The government has also since adopted an interim voluntary target of reducing emissions 50% from business-as-usual by 2030, which equates to about 20% below 2005 levels, and it will also consider the use of international credits to meet the target.

FIGURE 1: CARBON MARKET ELEMENTS OF THE GHG ACT

CAP	50% below 2005 level by 2050 (interim five-year phase targets)	**Registry**	Registry in place since 2007; trading platform for domestic credits under development
MRV	Mandatory reporting by emitters above 25,000 tonnes/yr threshold, with third-party verification	**Domestic Offset**	Credits issued by TEPA from the domestic performance standards and offset programme
Coverge	To be promulgated by central competent authority (TEPA)	**Int'l offset**	TEPA will set the standards for recognising international offsets, maximum of 10% of allocation
Allocation	To be done by TEPA in consultation with industry authorities, transition from free to auction/sales	**Penalty**	Three times the average market price during the compliance year, maximum of TWD 1,500/tCO_2e

THE ACT IN DETAIL

The Act provides a comprehensive legal framework for both mitigation and adaptation measures in Taiwan. As well as setting the legally-binding reduction target, it also provides the possibility to adjust the target depending on domestic and international development.

The Act designates the Taiwan Environmental Protection Administration (TEPA) as the central competent authority and requires it to develop the National Climate Change Action Framework. This will be reviewed every five years, as will the five-year emissions reduction targets. TEPA will also develop the GHG Reduction Action Plan, under which the central industry competent authorities will establish sectoral action programmes with economic incentives to reduce emissions.

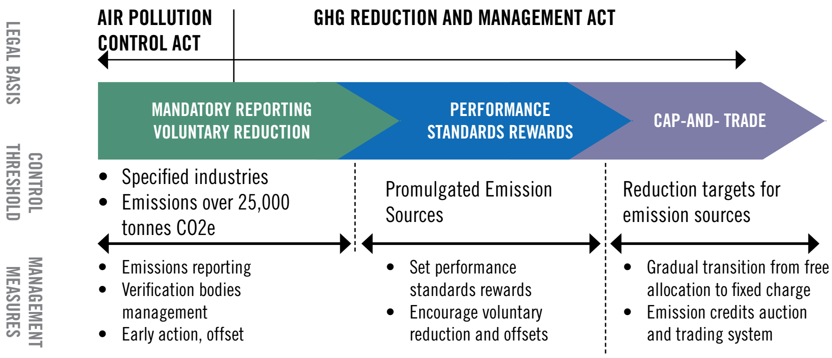
The Act lays out the foundation to develop a domestic carbon market in Taiwan (Figure 1). Before the Act was passed, TEPA had already designated GHGs as air pollutants and introduced mandatory reporting for those emitting more than 25,000 tonnes per year. TEPA will continue the reporting programme under the Act and published the draft rules for emissions reporting and verification in September 2015.

There will be a transition from existing programmes and rules to implement a carbon market in Taiwan (Figure 2). The programme rules for intensity-based early action (based on intensity standards for five major industrial sectors) and offset projects (based on Clean Development Mechanism and domestic methodologies) were promulgated by TEPA in September 2010. Submissions for early action and offset crediting need to get third-party verification before approval by TEPA, and the credits then are issued to the project owner's account in the national registry.

So far, over 43 million early action credits have been issued by TEPA, and 10 domestic offset projects have been registered, with one applying for credit issuance. The intensity-based early action credits can be used by entities that have commitments under the Environmental Impact Assessment law to offset part of their increased emissions, or for voluntary carbon neutrality; however, the offset ratio is still to be determined.

As the Act took effect on 1 July 2015, the early action crediting programme has ended, but the offset crediting programme will continue. Based on the previous rules, TEPA published draft rules under the Act for domestic offset projects in September 2015. The intensity-based crediting programme will evolve into the reward programme based on performance standards, which is currently under design. Since the previous intensity standards were product-based and only covered five major sectors (power, steel, cement, semiconductor, flat panel displays), the performance standards will be developed to cover more industries. The credits earned from offset projects and performance standards can later be used in the cap-and-trade system.

FIGURE 2: STEP-WISE CARBON MARKET IMPLEMENTATION



Finally, the Act authorises TEPA to establish a cap-and-trade system, considering developments at the UNFCCC level and other related international agreements. When setting the emission caps, TEPA will need to take into consideration industry trade intensity and reduction costs, as well as emissions leakage and international competitiveness. Allowances can be allocated freely, through auction, or for a fixed charge, with this charge to be adjusted according to the implementation of a tax on imported fossil fuels. .

One unique feature is that allowances for public utilities will be deducted for indirect emissions from end-users, since most of the power, oil and gas sectors are still state-owned and the energy prices are essentially set by the government. Thus, these upstream emissions will be addressed by other policy instruments such as the aforementioned tax on imported fuels, or an energy tax that is still under consideration.

INTERNATIONAL LINKAGE

Since the emissions reduction potentials in Taiwan are relatively low and reduction costs are relatively high, the use of international credits will be essential in meeting Taiwan's reduction target. Although the Act stipulates that priority will be put on procurement of domestic credits to meet the targets under the cap-and-trade system, international credits can be used for up to 10% of allocation.

TEPA, in consultation with relevant industry authorities, will set the standards for recognising international credits, while considering the UNFCCC or other international agreements, as well as factors such as energy efficiency improvement, procurement of domestic emission credits, and the long-term GHG reduction target. Before the Act was passed, TEPA has considered the CDM as the main source for international offsets, and welcomes the establishment of the voluntary cancellation platform by the CDM Executive Board. It is possible that the credits can be cancelled abroad and then issued as domestic credits in Taiwan with the proof of cancellation, similar to the current practice in the Korean ETS.

However, as the future of new market mechanisms and international linkage is still uncertain with the ongoing negotiations for the Paris agreement, Taiwan may reconsider the issue in the future, as well as look to the possibility of bilateral or regional market linkage.

LOOKING AHEAD

Although no precise timeline has been set for the establishment of a cap-and-trade system in Taiwan, TEPA is building on the existing domestic GHG programmes to strengthen the foundations for a future carbon market. Efforts are underway to set up a pilot trading platform for early action and offset credits in Taiwan.

In order to build an ETS tailored to the domestic situation but with potential for international linkage, TEPA looks forward to capacity building activities with organisations such as the German Emissions Trading Authority, the World Bank's Partnership for Market Readiness programme and IETA's Business Partnership for Market Readiness. At the same time, sharing Taiwan's past experiences with MRV, early action and offset crediting, and climate legislation can also be valuable to others looking to establish a sound foundation for emissions trading.

Carbon pricing is an effective tool for climate mitigation, and more international partnerships are emerging to explore ways for carbon market linkage. Through market mechanisms, governments can provide incentives to encourage the private sector to play an active role in rapid optimisation and maximisation of cost-effective and environmentally sound technologies. As an export-oriented economy, Taiwan also has significant investments worldwide, especially in the Asian region, and the dissemination of its low-carbon technologies can be further achieved through linking of international carbon pricing mechanisms. Such linkage is expected to minimise the costs of carbon technologies, support the growth of Taiwan's green industry, create added value in the green economy, benefit the global decarbonisation process, and maximise Taiwan's contribution to the global carbon reduction efforts.

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