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- POLICY BRIEF -

BASELINE AND CREDIT VERSUS CAP AND TRADE EMISSIONS TRADING SCHEMES

Below is a brief critique of a proposal to establish a baseline and credit type scheme instead of an emissions trading scheme based on a cap and trade mechanism. We make both general and specific comments.

Under a cap-and-trade system, an overall emissions cap is set to achieve emissions reductions. Emissions permits are auctioned or provided to participants based on an emissions reduction target. In a cap-and-trade system the restricted supply of permits creates scarcity and combined with trading of permits among participants creates a price for carbon and thereby drives liable parties to seek abatement opportunities that cost less than the permits. In other words, producers of goods that use processes that emit carbon have an incentive to find lower emission processes to minimise their permit liabilities and thereby reduce emissions. At the same time the price of products with embodied carbon rises relative to other goods, creating a demand side response that also acts to reduce emissions. In other words, consumers of goods that are produced using processes that emit carbon face higher prices and have an incentive to spend their money on less emissions intensive goods, thereby reducing emissions in the economy.

Under a baseline and credit scheme, an emissions intensity is set for emitting activities against a baseline (which can be business as usual or some proportion thereof) and credits are created for activities that achieve emissions intensities below the baseline and activities that have emissions intensities above the baseline have to buy such credits. The ability to generate credits from emissions reductions relative to baseline and the pressure to avoid having to buy permits for emissions in excess of the baseline provide incentives for participants to find lower emission production processes.

Some commentators have argued that a baseline and credit system has advantages over a cap and trade scheme as it reduce to pass on of costs especially for electricity generation and also allows other trade exposed energy intensive activities to be better protected.

Both schemes are market based instruments and therefore are likely to be equally efficient. The problems come when applying the schemes in practise.

General comments

- Under a baseline and credit scheme, consumers do not face any incentive to reduce their demand for emissions intensive goods. Baseline and credit schemes do not necessarily penalise emissions intensive activities and goods, thereby muting the incentive to consumers to buy less emissions intensive good or undertake less emission intensive activities (e.g. there is no reward for reducing the number of kilometres travelled in a car). Perversely, to the extent that less emission intensive activities are subsidised, there may be a rebound effect so that more of that activity is undertaken and overall emissions from that activity increases.

- Administrative costs under a base line and credit scheme are likely to be higher as these schemes are more complex to administer. Under a cap and trade, a cap is set and emissions are monitored against this cap. Under a baseline and credit system, a baseline has to be set for each emitting activity, usually based on historical emission and production rates. This means that the administrator has to establish a base line for each activity at each facility (generating plant, mine and industrial plant). Many of these facilities would not even have historical data to enable a proper base line to be set, so a theoretical base line is established based on formulas. This is complicated by the fact that emission intensities differ widely even amongst plants in the same industry (for example, methane emissions from coal mines differ widely from mine to mine). The Federal Government proposes to include around 1000 of the highest polluting sites. The cost of setting base lines for each of these sites would be very high, which would only increase once all sites are included. The costs of setting and verifying emission savings from each abatement activity would also be high.

- Baseline and credit systems create greater uncertainty in achieving given targets for emission reductions. This is because the baseline and credit system is based on emission intensity not emissions (as is a cap and trade scheme). Therefore in any one year there is no certainty that a target is met (say if economic growth increases more than expected). This may require catch up later through resetting baselines, creating uncertainty for market participants through continually changing scheme parameters. This uncertainty also compounds the risk of meeting internationally set targets. There would be an additional liability on government/taxpayers in terms of buying international permits and again further subsiding emitting activities. This would also increase risks of institutional failure as governments may chose to renege on international obligations instead of complying with international commitments. This would weaken global action as has been seen in the case of Canada.

- Baseline and credit schemes can be more open to rorting, reducing its effectiveness in achieving a given target. This arises through the process of setting the baselines, which aims to encourage people to reduce emissions. But given the superior knowledge of each plant owner over their own processes, they can easily manipulate the calculation of the base line to levels that are higher than the real emission intensity, thus avoiding any impost. The plant can then claim an efficiency improvement against its baseline and be rewarded with certificates for improving its notional emission intensity as calculated against its baselines. The alleged savings from abatement activities is also open to rorting, as witnessed by the level of certificates awarded to demand side activities (mainly more efficient light globes) under the NSW NGGAS facilities, even though the activities are not necessarily carried out. Verifying emission intensity level and abatement activity adds to the administrative costs of the scheme.

Specific comments

- It is claimed that baseline and credit schemes can lead to lower wholesale electricity prices. An example is the NSW GGAS, where emission abatement activities are effectively subsidising low emission activities in electricity generation and thereby reduce wholesale electricity prices. Whilst this subsidy effect can occur in the wholesale market, someone has to pay for the certificates that generate the subsidy. There is no free lunch. In the electricity market, for example, the retailers would be largely liable to purchase the certificates. This purchase cost would then be passed on to consumers by the retailers. So from the end users' point of view, they may face lower wholesale prices but this is offset by the need to pay for the purchase of the certificates.

- For industries where there are no transparent wholesale markets, the cost of purchasing certificates would be felt directly. A coal miner would still need to pass on as much of the cost of reducing fugitive emissions from its mine in the same way as it would under a cap and trade scheme. Abating emissions is costly and this cost has to be borne by someone!

- Costs may even be higher still if significant rorting occurs to the extent that additional certificates are required to be created to achieve an emission target. Since high emitting plant are not necessarily forced to be shut down (or as quickly as they may under a cap and trade scheme), higher cost options for abatement may be required.