

## PMR TECHNICAL WORKSHOP

### Carbon Leakage: Theory, Evidence and Policy

#### Session 3: Break-out Group Exercise – Policy responses to carbon leakage

##### □ Objective:

Concerns about the risks of carbon leakage have led most jurisdictions that have implemented a carbon price to also design carbon leakage prevention measures. Policy makers have developed a range of approaches to addressing carbon leakage, consistent with their particular economic and social circumstances. Despite the variety of policy approaches there is scope to learn from the real world experience when considering the future implementation of similar measures.

The key questions for policy makers designing leakage prevention mechanisms are:

- What sectors should be targeted (supported) by the leakage prevention mechanisms; and
- What form should that leakage prevention mechanism take?

The purpose of this breakout group exercise is to explore these two key design questions in more detail through discussing one of four real world case studies.

##### □ Instructions:

Participants are asked to join one of four break out groups. Groups will have 50 minutes to discuss the case study below. Each group will nominate a scribe and a person to report back on their discussions. Groups will be facilitated by an expert or member of the PMR Secretariat.

##### □ Case study:

The New Zealand ETS has been in operation since 2008 and since that time has gone through several key amendments, including to how allowances (called New Zealand Units or NZUs) are allocated. Participants who can pass on costs of the ETS, such as fuel companies, are not allocated free units. Participants such as exporters with products that are priced internationally are allocated free units. These trade-exposed industries receive a free allocation of either 60% or 90% of their historic (2006 – 2008 approximately) emissions annually.

In the legislation originally passed in 2008, the free allocation of units would have been phased out at the rate of a 1/12 (8.3%) reduction each year from 2019 to 2029. The amount of allocation would have been capped based on historical absolute emissions. This allocation approach was never implemented.

In 2009, with a change in Government, the NZ ETS was amended including important changes to the industrial allocation rules which essentially remain the same today. Allocations became output based, rather than capped. Around the same time an emissions trading scheme was proposed for introduction in Australia, a close trading partner to New Zealand. An important intention for the new allocation

approach was to have comparable allocations for similar activities in New Zealand for competitiveness reasons. This also leveraged the policy work undertaken in Australia in defining an allocation approach for emissions intensive trade exposed activities there. In 2009 the intention was to phase out allocation slowly (with a reduction in the level of assistance of 1.3 per cent per year), however in 2012 further legislative amendments were made to maintain the level of assistance at 60 and 90 per cent.

NZUs are allocated for free to persons whose activities are considered both “emissions intensive” and “trade exposed”, that is to persons carrying out eligible industrial activities. Allocation is provided on the basis of defined ‘activities’, not on the basis of sites, facilities or company. An ‘activity’ consists of the physical, biological or chemical transformation of inputs into a given set of outputs (eg, the chemical transformation of hydrocarbons into methanol, or the physical and chemical transformation of silicon dioxide to produce glass containers). These eligible activities are largely consistent with those proposed in Australia at the time, with some NZ specific eligible activities added.

The number of NZUs that a person can get for an eligible activity depends on three things:

1. the level of assistance (LA) for the activity. Expressed as a percentage, this depends on the emissions intensity of the activity. Moderately emissions intensive activities are those that have associated emissions of more than 800 tonnes of carbon dioxide equivalent emissions per million dollars of revenue. Highly emissions intensive activities are those that produce more than 1600 tonnes per million dollars of revenue. The level of assistance for activities with: high emissions intensity is 90 per cent, and moderate emissions intensity is 60 per cent.
2. the amount of prescribed product (PDCT) – produced from that activity. Prescribed products are defined exactly in the regulations, for example tissue paper with grammage and moisture content within a prescribed range.
3. the allocative baseline (AB) for that product. This number is fixed in the regulations and depends on the emissions intensity of the product. The baseline was initially determined using the industry average emissions per unit of output for the financial years 2006-8. The baseline considers not just direct emissions but also indirect emissions from electricity consumed reflecting that the carbon cost on electricity is passed on to consumers.

Also since the 2009 and 2012 amendments persons with obligations under the ETS are only required to surrender one NZU for each two tonnes of CO<sub>2</sub>-equivalent of their actual emissions. The number of NZUs allocated is also halved to reflect the lower compliance costs.

The following formula is used to calculate the allocation for each eligible activity the person undertakes:

$$\text{Allocation} = \sum (\text{LA} \times \text{PDCT} \times \text{AB}) \div 2$$

That is, to find the number of NZUs a person is entitled to:

1. Multiply the amount of specified product you produce by the allocative baseline for that product.
2. If you produce more than one specified product, repeat step 1 for each, then add these numbers together.
3. Multiply this figure by the level of assistance for that activity.

4. Divide the number by two.

**Exercise:**

1. What do you think are the main advantages and disadvantages of the criteria used to determine the eligible activities?
2. What is the relationship between output and free allowance allocation? What do you think are the advantages and disadvantages of this form of assistance?
3. What data do you think is required to support the design and implementation of the policy and what does this imply for reporting and administrative costs?
4. What do you think were the main drivers for the change in policy over the years? Discuss the rationale for aligning policy with Australia? What are some of the advantages and disadvantages of the policy changes?