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CARBON PRICING AND THE WASTE INDUSTRY (NSW)

What is the Carbon Pricing Mechanism?

The Australian Government's Carbon Pricing Mechanism (CPM) is also referred to as the "Carbon Tax". The CPM is an emissions trading scheme which imposes a cap on emissions in certain sectors of the economy, and requires those sectors to surrender carbon units to match their emissions. It therefore imposes a price on each tonne of emissions for large emitters in those sectors.

The CPM will commence 1 July 2012 with a fixed carbon price for 3 years. From 1 July 2015 a floating carbon price will apply.

Carbon Price will increase over time

From 1 July 2012 to 1 July 2015 carbon units will be issued at a fixed price (with escalation of 2.5% in real terms). The "fixed price" will therefore be:

- \$23.00/tonne CO₂-e from 1 July 2012 to 30 June 2013
- \$24.15/tonne CO₂-e 1 July 2013 to 30 June 2014
- \$25.40/tonne CO₂-e 1 July 2014 to 30 June 2015

The scheme will then enter an emissions trading phase referred to as the flexible charge period.

- From 1 July 2015 to 30 June 2018, a price floor and ceiling will manage price volatility.
- From 1 July 2018 the price will then be set by the market only (i.e. at auction).

Carbon Price impact on waste costs

- Road transport fuel is excluded from the CPM.
- On-site fuel usage (e.g. loaders & landfill compactors) will be liable
- All landfills with annual emissions greater than 25,000 tonnes pa of CO₂-e will be liable. Decomposing waste generates a mixture of CO₂ & methane but the methane is calculated to have a greenhouse impact 21x that of CO₂. This is why emissions are stated in terms of CO₂-e (the *equivalent* number of tonnes of CO₂). It also explains how 1 tonne of MSW can have greater than 1 tonne of emissions (CO₂-e).
- All approved landfills within the Sydney Metropolitan Area will be subject to the CPM.

Waste & recycling collection companies who charge waste generators for the final disposal of waste will need to factor in the CPM costs which will be added to the price of disposal from 1 July 2012.

Passing through carbon costs

Landfills will include carbon costs in the disposal price of waste from 1 July 2012.

Since waste decomposes *after* it is landfilled (landfill gas emissions actually occur over many years), the effective price for landfill emissions at the start of the scheme will not be \$23/tonne CO₂-e but will likely be escalated to \$30/t CO₂-e. This takes into account that the carbon price is likely to be higher when the emissions from today's waste occur.

LFG combustion & reuse credits and energy sales could offset some carbon costs

Under the Federal Government's Carbon Farming Initiative (CFI) landholders (and landfill operators) can in theory generate carbon credits (ACCU's) from a range of activities including reforestation and the combustion of landfill gas (LFG). The production and sale of energy produced from LFG also generates revenue. In reality, high proportions of LFG rights from large landfills in NSW were sold previously and are now owned by third parties. However, newer landfills could generate some offsets which could help compensate carbon costs.

Different waste types have different carbon impacts (emission factors)

Because the organic component of the waste will differ according to the class of waste a landfill is allowed to accept, so will the amount of LFG that is capable of being generated from each tonne of that waste. Different classes of wastes have been calculated to have specific *emission factors* according to the amounts of LFG generated per tonne of waste. Following are some National Greenhouse-gas and Energy Reporting Scheme (NGERS) default factors:

- MSW 1.19t CO₂-e/tonne of waste
- Wet C&I Waste 1.08t CO₂-e/tonne of waste
- Dry C&I Waste 0.95t CO₂-e/tonne of waste
- C&D Waste 0.17t CO₂-e/tonne of waste

LFG collection system efficiency affects carbon impact

For the time being there is an assumption that landfill gas collection systems operate at a reduced level of efficiency (say 50%) and this factor is taken into account when calculating the carbon impact from the LFG generated by each tonne of waste.

- Individual landfills may claim varying levels of collection efficiency for their LFG collection systems.
- This will be a factor in the amount of carbon impact they are liable for under the CPM and the costs they pass through.
- The self-assessment will be stated in annual NGERS reporting but will need to be realistic enough to withstand eventual audit.

Indicative CPM costs charged per tonne of waste from 1 July 2012

CPM costs charged per tonne of waste by landfills to waste transporters will take into account -:

- Escalated carbon cost of the future emissions (initial price \$30/t CO₂-e);
- Calculated emission factor of the waste type;
- Agreed level of efficiency of the LFG collection system (NGERS cap of 75% - probable range 30%-60%);
- Electricity, on-site fuel and compliance costs (initial cost circa \$2/t CO₂-e); and
- Contingency for future calculation changes in greenhouse impact of methane (est.\$4/t CO₂-e)

Use of the default factors listed above would generate the following CPM costs-:

- MSW \$24/tonne of waste
- Wet C&I Waste \$22/tonne of waste
- Dry C&I Waste \$20/tonne of waste
- C&D Waste \$7/tonne of waste

Landfill operators can estimate CPM cost for specific waste streams

- Landfill operators will have a certain amount of discretion in how they calculate these costs although they will need to be realistic enough to withstand eventual audit.
- There is still debate as to what allowance will be made for alternative methods of calculation and it may be that some operators are more conservative than others in their estimation of future liability and market direction.
- The above information represents one (conservative) approach to the calculation and passing through of CPM costs.
- Waste transporters and major waste generators should discuss with landfill operators the details of collection efficiency and specific emission factors used to calculate their proposed CPM based price increases as well as the operator's approach to payment of future liability.

Landfill operators may have differing views as to providing for future liability

- There are a number of allowable methods of modelling emissions from waste using either default or specific factors and operators are able to make their own decision as to which method they employ.
- Future liabilities for waste emissions can be funded either by early purchase of permits or by accrual of funds for later purchase - with price risk built in.
- It is also possible some operators may not adequately provide for future liabilities and eventually become insolvent.

Avoid making misleading claims

The ACCC has received additional Government funding to police carbon cost claims and can impose severe penalties on businesses making inaccurate claims of-

- Price increases due to the CPM,
- Being “*carbon neutral*”
- Being “*clean and green*”

NSW Solid Waste Levy

To assist Members and waste generators we also note the following solid waste levy rates in NSW (from 1st July 2011) -

- Sydney Metropolitan Area \$82.20 per tonne
- Extended Regulated Area \$78.60 per tonne; and
- Regional Regulated Area \$31.10 per tonne

Whilst the levy is currently under review by the NSW Government, it should be noted that there are planned increases to the above rates of \$10 per tonne (plus a CPI increase on the base rate) from 1st July each year until 2015 (as prescribed in section 88 of the *Protection of the Environment Operations Act 1997*).

NSW Liquid Waste Levy

The current liquid waste levy in NSW is \$64.50 per tonne, with a projected CPI increase on 1st July 2012 (also as prescribed in section 88 of the *Protection of the Environment Operations Act 1997*).

NOTE - GST is payable on all costs including CPM and Waste Levy.

27 February 2012