Senate Standing Committee on Environment and Communications Legislation Committee Answers to questions on notice Environment portfolio

Question No: 101

Hearing: Supplementary Budget Estimates

Outcome: Outcome 7

Programme: Emissions Reduction Fund Taskforce

Topic: Industry Baseline Reductions

Hansard Page: N/A

Question Date: 27 November 2013

Question Type: Written

Senator Urquhart asked:

How much have sectors like Aluminium, Alumina and Cement reduced their emissions-intensity since the baselines for emissions-intensive trade-exposed assistance were set?

Answer:

Based on preliminary facility-level data for 2012-13, we estimate that there has been a small decrease in the industry average emissions intensities of production for each of aluminium, alumina and clinker (cement). However, a range of issues should be taken into account when considering the way in which this decrease has been estimated.

Under the Jobs and Competitiveness Program (JCP), assistance is provided in the form of free carbon units to eligible entities that undertake emissions-intensive trade-exposed (EITE) activities to assist with the costs of the carbon tax. The amount of assistance is determined using historical baselines of emissions-intensity and electricity-intensity. Specifically, the baselines reflect the industry average emissions from, and electricity used in, the activity in the period 2006-07 and 2007-08. The use of historical baselines is designed to encourage entities undertaking EITE activities to reduce the emissions-intensity of production over time.

For the purposes of answering this question, 'emissions-intensity' is taken to mean the sum of direct emissions-intensity and electricity-intensity.

Estimates of emissions intensity changes are complex. Some of the important caveats on the Department's estimates are:

- Given some changes in the industry over time, the industry average emissions intensities of the activities now do not in all cases reflect the exact facilities that operated during the historical base period when the emissions intensity baselines were established for EITE activities. For example, there have been announced closures in all three sectors since the baseline period.
- During the assessment of eligibility for EITE activities, each industry provided data on emissions and electricity that was specific to the activity as defined. However, recent data on emissions and electricity use is collected at a facility level, consistent with the National Greenhouse and Energy Reporting (NGER) requirements, and may therefore

encompass a broader range of activities at those facilities, other than the specific EITE activity.

- For simplicity, the electricity baseline for EITE activities assumes an emissions factor of 1 tonne carbon dioxide equivalent (tCO₂-e) per megawatt-hour (MWh) of electricity used in the activity, irrespective of whether the electricity is sourced from the grid or self-generated from renewables or diesel. A similar assumption has been made for this analysis which applies a constant emissions factor for electricity consumed by a facility or produced for own use. If the electricity used in an activity was sourced from lower emissions-intensive sources (on average) over time, this assumption would lead to an under-statement of the reduction in emissions intensity.
- Where an entity has undertaken two eligible EITE activities at the same facility, the emissions and electricity has only been reported in aggregate. In these cases, for the purpose of this analysis, an assumption has been made as to the distribution of emissions and electricity use for each activity.