

Senate Standing Committee on Economics

ANSWERS TO QUESTIONS ON NOTICE

Treasury Portfolio

Supplementary Estimates 22-23 October 2008

Question: sbt 62

Topic: Carbon Capture and Storage – Ultra Supercritical Coal

Hansard Page: E81

Senator XENOPHON asked:

Senator XENOPHON —In terms of the assumptions at table 21, you have ‘ultra supercritical coal’ at \$2,255 per kilowatt with a 0.5 de-escalator. With ‘USC’—ultra supercritical coal—’with post-combustion capture’, it is a bit more at \$2,482 but with a 1.5 per cent de-escalator. I do not understand how an ultra supercritical coal plant with post-combustion capture will be cheaper to build than one without post-combustion capture. If you have the added extras, how can it eventually be cheaper?

Ms Quinn —According to the table, the ultra supercritical coal is \$2,255 and the one at the bottom, the ‘USC with post-combustion capture’, is \$2,482.

Senator XENOPHON —But it will be cheaper eventually, won’t it?

Ms Quinn —Eventually, over time, it will be cheaper, if these de-escalations continue. But that is partly because the de-escalation costs take account of the higher level; the 1.5 is on the \$2,400. They do not necessarily cross over the time horizon that you are looking at.

Senator XENOPHON —I do not get it. How can something with post-combustion capture be cheaper to build than something without post-combustion capture, in a few years time?

Ms Quinn —It is not clear that it is.

Senator XENOPHON —It is. With a 1.5 per cent capital cost de-escalator, by about 2018-19 it will be cheaper.

Ms Quinn —I am happy to take that on notice, but I do not think that is the case.

Answer:

It will not. There was a typographical error in the Assumptions book released by the Treasury on 3 October 2008. The Assumptions book (Table 21) incorrectly states the capital cost of a USC plant with carbon capture as \$2,482 per kilo-watt. The capital cost used in the electricity sector modelling (and provided in Table B.23 in the full report) is \$3,044 per kilo-watt. From 2021 to 2050, the capital cost de-escalators for the two plants in question are assumed to be 0.5 per cent per year. The higher de-escalator for the USC plant with carbon capture (1.5 per cent per year) only operates from 2010 to 2020, which is not long enough for the USC with carbon capture to become cheaper than USC without carbon capture.