



Modelling methodology and assumptions – 2nd Addendum

A REPORT PREPARED FOR IPART

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Modelling methodology and assumptions - Addendum

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1 Introduction

The Independent Pricing and Regulatory Tribunal (IPART) has received terms of reference for an investigation and report on regulated retail tariffs and charges for electricity to apply between 1 July 2010 and 30 June 2013 (current determination).

Frontier Economics (Frontier) has been engaged by IPART to provide advice on energy costs for the current determination. SFG Consulting has been engaged by IPART to provide advice on the retail margin for the current determination.

Frontier has previously released a report outlining the modelling methodology and assumptions used to determine the allowance for electricity purchase cost and the estimate of the LRMC of electricity generation.¹ Frontier also released an addendum to that report as part of IPART's draft determination.²

This second addendum to Frontier's *Modelling Methodology and Assumptions* report updates the initial report to reflect the most up-to-date input assumptions as used during the modelling process as part of IPART's final determination.

In particular, this addendum updates a data table initially outlined in Frontier's *Modelling Methodology and Assumptions* report and updated in the previous addendum which has subsequently been revised due to the availability of updated and more accurate information. Section 2 presents an updated version of Table 14 of Frontier's *Modelling Methodology and Assumptions* report regarding data for new entrant generation technologies.

An updated version of the spreadsheet which accompanied Frontier's *Modelling Methodology and Assumptions* report will be released with this addendum.

¹ Frontier Economics, *Modelling methodology and assumptions*, A Report for IPART, August 2009, available at http://www.ipart.nsw.gov.au/investigation_content.asp?industry=2§or=3&inquiry=196&doctype=5&dcategory=1&docgroup=1.

² Frontier Economics, *Modelling methodology and assumptions - Addendum*, A Report for IPART, December 2009, available at http://www.ipart.nsw.gov.au/investigation_content.asp?industry=2§or=3&inquiry=196&doctype=5&dcategory=1&docgroup=1.

2 New generation technology data

Outlined below is an updated version of Table 14 of Frontier's *Modelling Methodology and Assumptions* report.

For the final determination report, there have been two further changes to the modelling assumptions, relative to the draft report. A slight change has been made to the model developed by SFG Consulting to amortise fixed costs. This change is reflected in an updated example of how the amortisation is calculated, which is set out in the spreadsheet released with this addendum. IPART's WACC has also been updated since the draft report. This has resulted in a change to the results of the amortisation of fixed costs.

Table 14: Input assumptions for new generation technologies

Technology	Fixed cost (\$/kW)	Fixed O&M costs (\$/MW/year)	Annualised fixed costs (\$/MW)	Marginal Cost (SO) (\$/MWh)	Emissions (SO) (tCO ₂ /MWh)	Heat Rate (SO) (GJ/MWh)
CCGT	1,275	31,000	\$8.59	40.95	0.47	7.20
OCGT	918	13,000	\$13.09	85.63	0.76	11.61
SC Black Coal	2,213	48,000	\$24.93	12.77	0.88	9.00
USC Black Coal	2,368	48,000	\$26.38	11.97	0.82	8.37
IGCC Black Coal	3,481	50,000	\$42.56	15.34	0.86	8.78
SC Brown Coal	2,434	55,000	\$27.88	7.65	1.05	11.25

Sources: ACIL 2009 Report, Concept 2009 Report

Notes: Fixed costs are the amortised capital, tax and interest during construction costs.

All costs are in real 2009/10 dollars.

Marginal costs in this table are for plant in Central NSW region, except SC Brown Coal which is for VIC plant.

Emissions include fugitive emissions.

Emissions in this table are for plant in NSW region, except SC Brown Coal which is for VIC plant.

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