APPENDIX C - OUTPUT DATA FROM THE MARKET CLEARING ENGINE

C.1 INTRODUCTION

C.1.1 The market clearing engine shall produce, at minimum, the outputs described in sections C.2 to C.4 of this Appendix.

C.2 REGISTERED FACILITY AND INTERTIE SPECIFIC QUANTITIES

C.2.1 The market clearing engine shall produce, using the mathematical model in Appendix 6D, end-of-dispatch period target values for the following physical services for each registered facility that has associated with it a valid offer to provide or a valid bid to withdraw that physical service:

C.2.1.1 the amount of energy scheduled to be injected onto or withdrawn through the transmission system, expressed in MW;

C.2.1.2 the amount of reserve, for each reserve class, scheduled to be provided, expressed in MW; and

C.2.1.3 the amount of regulation scheduled to be provided, expressed in MW.

C.2.2 The market clearing engine shall produce, using the mathematical model in Appendix 6D, end-of-dispatch period target values for the energy to be injected onto, or withdrawn from, the transmission system in each dispatch period on each intertie, expressed in MW.

C.3 PRICES

C.3.1 The market clearing engine shall produce, using the mathematical model in Appendix 6D, the following prices for each dispatch period:

C.3.1.1 the market energy price or MEP for each market network node, expressed in $/MWh;

C.3.1.2 the uniform Singapore energy price or USEP, expressed in $/MWh;

C.3.1.3 the price of reserve for each reserve class, expressed in $/MWh;
C.3.1.4 the market reserve price or MRP for each reserve provider group, expressed in $/MWh;

C.3.1.5 market regulation price or MFP, expressed in $/MWh; and

C.3.1.6 the load curtailment price or LCP, expressed in $/MWh.

C.4 ADDITIONAL DATA

C.4.1 The market clearing engine shall, at a minimum, produce the following information for each dispatch period:

C.4.1.1 the total load scheduled to be supplied at each dispatch network node and in aggregate, expressed in MW;

C.4.1.2 the aggregate of the total generation scheduled at each generation registered facility and total import scheduled for each import registered facility and in aggregate, expressed in MW;

C.4.1.2A the total energy scheduled to be withdrawn for each restricted energy bid associated with an LRF with REB, expressed in MW;

C.4.1.2B the load curtailment in respect of each LRF with REB, expressed in MW;

C.4.1.2C the total load curtailment in respect of all LRFs with REB, expressed in MW;

C.4.1.2D the total transmission losses in the system, expressed in MW;

C.4.1.3 the extent of any shortfall in energy, by dispatch network node and in aggregate, expressed in MW;

C.4.1.4 the extent of any surplus in energy, by dispatch network node and in aggregate, expressed in MW;

C.4.1.4A the total reserve requirement by reserve class, expressed in MW;

C.4.1.5 total reserve scheduled to supply each reserve class, from each reserve provider group and in aggregate, expressed in MW;

C.4.1.6 the extent of any shortfall in reserve, by reserve class, expressed in MW;

C.4.1.6A the total regulation requirement, expressed in MW;
C.4.1.7 total regulation scheduled, expressed in MW;

C.4.1.8 the extent of any shortfall in regulation, expressed in MW;

C.4.1.9 predicted power flows and energy losses on dispatch network lines, expressed in MW;

C.4.1.10 a list of security constraints and generation fixing constraints applied;

C.4.1.11 details of the extent of any constraint violations;

C.4.1.12 the value, in dollars, of the objective function specified in Appendix 6D; and

C.4.1.13 estimated hourly energy uplift rebate, determined in accordance with section D.25.1.13 of Appendix 6D, expressed in $/MWh.