

COMMERCE COMMISSION

DECISION NO. 280

Determinations pursuant to the Commerce Act 1986 in the matter of two applications for authorisation of restrictive trade practices. These are applications by:

Electricity Market Company Limited

for authorisation of:

- the pricing mechanisms set out in rule 4, section G, part 2, and in rule 5, section A, part 2 of the New Zealand Electricity Market Rules applicable from 1 October 1996;
- the prudential provisions contained in section H, part 2 of those Rules; and
- the adoption of metering standards pursuant to rule 6.8, section H, part 2 of those Rules.

The Commission: A E Bollard (Chairman)
J G Auton
K M Brown
T G Stapleton

Determinations: Pursuant to ss 58 and 61(1)(b) of the Commerce Act 1986, the Commission determines to decline the applications for authorisation of the pricing mechanisms set out in rule 4, section G, part 2, and in rule 5, section A, part 2 of the New Zealand Electricity Market Rules applicable from 1 October 1996, and the prudential provisions contained in section H, part 2 of those Rules, and the adoption of metering standards pursuant to rule 6.8, section H, part 2 of those Rules, on the grounds that they do not lessen competition and that, accordingly, authorisation is neither required by the Act nor within the jurisdiction of the Commission.

Date of Determinations: 13 September 1996

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THE APPLICATIONS

- 1 The Commission has received two applications for authorisation under s 58 of the Commerce Act 1986 (the Act) from Electricity Market Company Ltd (EMCO). These are for authorisation of:
 - the pricing mechanisms set out in rule 4, section G, part 2 of the New Zealand Electricity Market (NZEM) Rules (the Real Time Market pricing mechanisms) applicable from 1 October 1996 (the Rules);
 - the pricing mechanisms set out in rule 5 of section A, part 2 of the Rules (the Day Ahead Market pricing mechanisms).
 - the prudential provisions contained in section H, part 2 of the Rules (the prudential provisions); and
 - the adoption of metering standards pursuant to rule 6.8, section H, part 2 of the Rules (the metering standards rule).

COMMISSION PROCEDURES

- 2 The application for authorisation of the Real Time Market pricing mechanisms, the prudential provisions and the adoption of metering standards was registered by the Commission on 21 June 1996. The application for authorisation of the Day Ahead Market pricing mechanisms was registered on 9 July 1996. Notice of the applications, in accordance with s 60(2)(c) of the Act, was given to 59 parties who were considered likely to have an interest in both applications. The Commission gave public notice of the first application on 28 June 1996 in the New Zealand Herald, the Waikato Times, the Dominion, the Press, the Otago Daily Times and the Southland Times. As the description in the notice for the first application was sufficiently broad to cover the matter contained in the second application, the Commission did not consider it necessary to give public notice of the second application.
- 3 As both the applications are from EMCO, and as the matters to which they refer are closely interlinked, the Commission has considered the applications together and in the time frame it had adopted for the first application. The Commission asked any person who considered they would be disadvantaged by this approach to contact it. No responses were received.
- 4 Section 62(6) of the Act provides that the Commission may hold a conference prior to making a determination in respect of an application under s 58 of the Act. The Commission held a conference on 19, 20 and 21 August 1996 to assist it in its consideration of the applications. Appendix One sets out a list of those parties who participated in the conference.

Interests of Commission Members

- 5 In its draft determination, and in a separate letter, the Commission advised interested parties of interests of the Chairman and two of the Commission members directed to sit as members of the Division to consider and determine the applications. The Commission asked any person who wished to raise any issue regarding those interests to contact it. All of the responses received indicated that the interests were not such that the Chairman and members should be disqualified from considering the applications.
- 6 The Chairman and the members of the Commission do not believe that these interests and relationships are interests such as described in s 14 of the Act that disqualify the Chairman or the members from taking part in the consideration or determination of the applications.

Statement of Economic Policy in Terms of Section 26 of the Act

- 7 Section 26 statements are formal mechanisms for the transmission of Government policy to the Commission. Section 26(1) provides that the Commission shall have regard to the policies transmitted in this way.
- 8 On 12 December 1995, the Minister of Commerce issued such a statement which set out the Government's overall policy objective with regard to the wholesale electricity market. This objective is to ensure the continuing availability of energy services at least cost to the economy as a whole, consistent with sustainable development. The s 26 statement received is attached as Appendix Two.
- 9 The statement notes the Government's conclusion that the desired outcomes of pressure on electricity prices and costs, and accurate price signals, would best be achieved by workable or effective competition. In particular, this would comprise:
- vigorous competition from private sector generation and demand-side management to meet new electricity demand;
 - diversity of prices and other conditions for selling electricity on contract; and
 - competitive disciplines on prices for electricity in the spot market.
- 10 The statement notes that barriers to competition should be overcome in a manner that recognises the particular characteristics of the New Zealand electricity system, maintains security of supply and enables producers, distributors, retailers and consumers to develop systems, skills and experience necessary to operate effectively in a competitive environment.
- 11 On 6 October 1993, the Minister of Commerce issued a s 26 statement which outlined the Government's economic policy in relation to electricity transmission. This statement was amended slightly on 20 December 1994.

- 12 Electricity transmission is generally outside the scope of the rules for which authorisation is sought. However, one aspect of the statement appears relevant to the current applications, viz:

“... the technical and commercial risks inherent in operating the transmission system should be allocated where they are most efficiently and effectively managed.”

Consideration to be Given to Statements of Government Policy

- 13 In *NZ Co-operative Dairy Company Ltd and Anor v Commerce Commission* (1994) 3 NZBLC 99-219, Wylie J stated that the Commission had adopted the correct approach to a s 26 statement in *NZ Kiwifruit Exporters Association (Inc) - NZ Kiwifruit Coolstorers Association (Inc)* (1989) 2 NZBLC (Com) 104,485. That approach was that the criteria in the Act must be assessed and balanced by the Commission, paying due attention, heed and care to any policy transmitted to the Commission by the Government.
- 14 Wylie J said that, as with any other evidence, it is for the Commission to assess the weight to be given to a statement of this kind. It is simply an evidentiary statement of Government policy and not a direction.
- 15 The Commission may not ignore the statement. It must be given genuine attention and thought, and such weight as the Commission considers appropriate. In the end, however weighty the statement may be as an expression of considered Government policy, it does not have any legislative effect to vary the nature of the duties the Commission must perform.

THE APPLICANT

EMCO

- 16 EMCO was established in August 1993 by Electricity Corporation of New Zealand (ECNZ) and Electricity Supply Association of New Zealand (ESANZ) for the purpose of developing and providing the various services required by the proposed wholesale electricity market. In terms of a shareholders' agreement between ECNZ and ESANZ, EMCO is required to carry out its functions “in a neutral, efficient and non-discriminatory manner for the benefit of the electricity industry, for all consumers and for the broad, economic and social benefit of New Zealand”.
- 17 In September 1995, the ownership of EMCO was rearranged such that Trans Power New Zealand Ltd (Trans Power), ESANZ and ECNZ are now equal shareholders in EMCO.
- 18 EMCO administers the rules which govern NZEM. NZEM is not a member managed organisation unlike, for example, the NZ Stock Exchange. There is a distinction between the owners of EMCO (the NZEM administrator), and those who are members of NZEM (the NZEM participants). It is the NZEM participants, and not EMCO, who determine the market rules. The rule making process is described in paragraphs 58 and 59 below.

- 19 A list of NZEM participants is attached at Appendix Three.
- 20 EMCO currently provides a range of services to NZEM participants, including:
- the administration of the Metering and Reconciliation Information Agreement (MARIA). This agreement between many electricity industry participants provides a means by which electricity sales and purchases are reconciled;
 - the administration of the interim rules (which are described in paragraphs 46 to 55 below);
 - the calculation and publication of the daily wholesale price of electricity in accordance with Rules 2-6 section A of part 2 of the interim rules;
 - the operation of a commodities market information and trading system. This is an on-line, automated transaction process; and
 - the provision of information which has the potential to influence the price of electricity to NZEM participants. Such information is provided through EMCO's on-line system described above. Typical of the information provided by EMCO is hydrological data on hydro power station storage reservoir levels and river flows feeding such storage lakes, meteorological information on temperatures and forecast weather patterns, and information on the operational status of generation and transmission equipment. Finally, the system provides news and other market information.

THE ELECTRICITY INDUSTRY

Generation

- 21 Historically, ECNZ has been by far New Zealand's largest electricity generator, owning about 7,700 megawatts of electricity generation capacity, 96% of the capacity available for public supply in New Zealand.
- 22 In 1995, the Government determined that ECNZ should be split into two competing state-owned enterprises. To that end, it established Contact Energy Ltd (Contact) as a competing generator to ECNZ. Contact was incorporated on 8 November 1995. It became a state-owned enterprise by Order in Council effective from 17 November 1995.
- 23 Various rights and assets of ECNZ were vested in Contact on 1 February 1996. These included Roxburgh, Clyde, New Plymouth, Wairakei, Ohaaki, Otahuhu, Stratford and Whirinaki power stations.
- 24 In addition, the Government has determined that ECNZ should progressively sell eight of its smaller hydro power stations. These power stations account for about 4% of New Zealand's electricity generating capacity. It is not intended that these power stations will be sold until the latter half of 1997.

- 25 The Government has also decided that, along with the transfer of the various assets, ECNZ will be subject to additional artificial constraints on its market power. These constraints will be in the form of:
- restraints on ECNZ constructing new generating capacity; and
 - the necessity for ECNZ to offer a high level of its generating capacity to purchasers in the form of long term supply contracts.
- 26 ECNZ and Contact are now the major generators in the market. ECNZ, with 30 power stations, has the capacity to generate approximately 68% of all electricity supplied in New Zealand, while Contact, with 8 power stations, has the capacity to generate 28% of the electricity supplied.
- 27 Around 4% of total electricity used in New Zealand is generated by a number of small local hydro stations owned by energy companies and embedded in the local distribution systems. Further generation capacity capable of providing approximately 8% of New Zealand's electricity need is in the process of being built or is likely to be built by non-government entities within two years.
- 28 Between 66% and 83% (depending on the quantity of water inflow into the catchment areas of the relevant rivers) of New Zealand's electricity needs are met by hydro electricity. The remainder is met by geothermal or fossil fuelled thermal power stations.
- 29 The value of hydro power station "fuel" (water stored in hydro reservoirs) is determined by a calculation of the potential cost of later having to operate a thermal hydro-firming station to re-establish reservoir water levels to ensure the predetermined acceptable level of risk to security of supply is maintained. At present, the system is operated such that sufficient water storage is maintained to meet a one in 60 dry year situation.
- 30 Hydro-firming occurs when falling reservoir levels have moved the dispatch price of hydro generation to above that of the cheapest gas fired power station. In times of low water inflows into hydro power station catchment areas and high demand for electricity, the value of stored water increases greatly. As a result, the merit order (a list of New Zealand's power stations ranked according to the marginal cost of generation from each station) changes significantly under different hydrological and electricity demand conditions.
- 31 Other public supply power stations are owned by various power companies and have a potential capacity of about 350 megawatts. These are mostly small hydro power stations embedded in the power companies' distribution networks, although in some cases a power company uses Trans Power's high voltage network to transmit electricity to consumers.
- 32 Major additional electricity generating capacity known to be planned for commissioning in the near future is as follows:

- Southdown natural gas fired combined cycle power station, owned by TransAlta Energy New Zealand Ltd (TransAlta) and Mercury Energy Ltd (Mercury), with a capacity of 124 megawatts. It is situated in South Auckland and is due to go into commercial production in early 1997;
- Poihipi geothermal power station, owned by a joint venture between Mercury and Geotherm Energy Ltd, with a capacity of about 50 megawatts. It is situated near Taupo and is due to go into commercial production in early 1997; and
- the Taranaki natural gas fired combined cycle power station, owned by a joint venture between Fletcher Challenge Ltd, TransAlta and Mercury, with a capacity of about 350 megawatts. It is situated near Stratford and is due to go into commercial production in April 1998.

33 ECNZ estimates that, by mid 1998, its market share will have reduced to around 58% by volume of electricity supplied.

Transmission

34 The transmission grid is owned and operated by Trans Power. Trans Power was separated from ECNZ on 1 July 1994, and operates as a state-owned enterprise.

35 The grid network interconnects all generation stations (other than those embedded in power companies' distribution networks) and the substations which supply electricity to major consumers and power companies. The transmission grid comprises a network of 220, 110, 66 and 50 kilovolt transmission lines and equivalent voltage substations. Substations contain the switches and isolators which are used to control the operation of transmission lines, metering and protection equipment and transformers to reduce the very high voltages to levels more appropriate for distribution around industrial plants or power company distribution networks.

36 The grid of each island is connected by the 1240 megawatt capacity high voltage direct current (HVDC) link. This link transmits power in both directions, depending on hydrological conditions throughout New Zealand.

37 Transmission losses account for 5-6% of electricity generated.

38 Trans Power also provides scheduling and dispatch services to generators. It follows a set of rules when switching power stations in and out of the grid (dispatching). These rules recognise environmental constraints, station operating modes, the availability of power station plant, the capacity limitations of the transmission system and the marginal cost of generation from each station. The merit order is the most important consideration in the dispatch of power stations. Trans Power uses merit order information on a real time basis to switch power stations successively in and out of the power system to match supply with demand. This ensures the lowest overall cost of electricity generation.

Distribution

- 39 New Zealand has 41 power companies which are responsible for distributing and retailing electricity to the majority of consumers in the country. They are owned by community and consumer trusts, or local authorities, or private shareholders, or a mixture of all three.
- 40 The distribution networks of the power companies operate at lower voltages than Trans Power's grid and in smaller geographical areas. Electricity is taken from the low voltage side of a Trans Power substation and distributed at various voltages to consumers. During the distribution process, the voltage may be further reduced in power companies' own zone substations or in transformers situated on consumers' industrial premises. Most consumers receive electricity at either 11 kilovolts or 400/230 volts.
- 41 Distribution losses vary between the individual power companies but may be of the order of 5%.

Retailing

- 42 Retailing of electricity is currently carried out primarily by power companies and by a number of specialist electricity retailers established by power companies or groups of power companies.

THE REFORMS OF THE WHOLESALE ELECTRICITY MARKET

The Wholesale Electricity Market Before 1 February 1996

- 43 Prior to 1 February 1996, ECNZ's customers entered into supply agreements with ECNZ which specified two pricing structures under which electricity might be purchased. These were:
- *the week ahead price*, which was determined by EMCO using forecast demand and supply information. Potentially, a different price could be set for each half hour period of the forthcoming week. The week ahead price was referred to as the 'notified charge' in the energy supply contract; and

- *the financial hedge (hedge) price*, which fixed the price of electricity for each half hour period for the following year. Hedges were offered by ECNZ at prices set by it. The hedge prices provided protection against unexpected changes in the week ahead price for the following year.

44 ECNZ also sold a substantial proportion of its electricity to Comalco Power NZ Ltd (Comalco) under a number of long-term bilateral contracts.

45 These arrangements were forced to change with the entry into the market by Contact.

The Wholesale Electricity Market From 1 February 1996

46 During 1995, various working groups finalised rules (the interim rules) for an interim wholesale electricity market, to operate from 1 February 1996 to 30 September 1996 (the interim period). This was intended to smooth the transition to a fully competitive wholesale market from 1 October 1996.

47 Parts of these rules were submitted to the Commission for authorisation late in 1995. On 30 January 1996, the Commission authorised the pricing mechanism set out in Rules 2 to 6 (inclusive) of section A of part 2 of the proposed rules for the NZEM for the interim period. In the same Decision (No. 277), the Commission declined to authorise the Interim Supply Agreement (the ISA) on the grounds that it did not lessen competition in the relevant market, and so authorisation was neither required by the Act nor within the Commission's jurisdiction.

48 At the time of the implementation of the interim rules, EMCO, ECNZ and Contact claimed the potential for more rapid change was limited by ECNZ's existing energy supply contracts which expire on 30 September 1996.

49 Since 1 February 1996, Contact has supplied all its production to ECNZ pursuant to the ISA and has been paid for its production in accordance with formulae set out in the ISA. Contact has also developed electricity products to compete with ECNZ in the wholesale electricity market after the interim period. Changes to the wholesale market regime were introduced in two phases during this period.

1 February 1996 - 5 April 1996

50 From 1 February 1996 until 5 April 1996, EMCO continued to determine the week ahead price as it had previously, but received separate offers to generate electricity from Contact and ECNZ.

51 Under the terms of the ISA, Contact sold all of its electricity to ECNZ. ECNZ and Contact independently calculated station availability and capacity and the price at which each was prepared to provide electricity for each station for the forthcoming week. EMCO collated this information to form the merit order.

52 EMCO forecasted the likely level of demand, and combined this with the merit order to set the price of electricity for the following week.

53 Therefore, the major change during this period was the development of competition between Contact and ECNZ to run the marginal power station.

6 April 1996 to the Present

54 Between 6 April 1996 and the present, the following changes have occurred:

- the prices in ECNZ's energy supply contracts have been set on a day ahead rather than a week ahead basis;
- EMCO has formulated the merit order on a daily basis, rather than a weekly basis, and has combined this information with forecast demand to issue a supply curve showing a range of prices for different levels of demand;
- the actual price paid by purchasers of electricity has been calculated from the marginal cost of the last station used to meet actual demand. Any unanticipated changes in demand have been reflected in the actual price that purchasers are required to pay for non-hedged purchases of electricity. The day ahead price has continued to be capped;
- prices have been established separately for the South and North Islands; and
- scheduling and dispatch have been aimed at minimising overall generation costs.

55 Hedges have continued to be available from ECNZ, and are able to be traded during the interim period.

The Wholesale Electricity Market After 30 September 1996

56 In a policy statement of 8 June 1995, the Government noted that where there is more than one electricity generator, a neutral and transparent "pooling" mechanism is required to ensure least cost co-ordination of dispatch and back-up generation. Further, it noted in the statement that buyers and sellers of electricity at the wholesale level are currently working together to establish an "efficient" mechanism for the New Zealand wholesale electricity market.

57 The Rules, some of which are the subject of the applications for authorisation, arise from the work of these buyers and sellers of electricity, and EMCO. Subject to this Decision, they become effective on 1 October 1996. They provide the framework for the Day Ahead Market and the Real Time Market, and their governance.

58 The rule making process described in rule 5 of part 1 of the Rules was followed in the development of the Day Ahead and Real Time Markets. The Rules were sent to NZEM participants for voting. Voting rights are allocated according to market share (under the introductory rules to Part 2 of the Rules). Both Generator Class Market Participants (GCMPs) and Purchaser Class Market Participants (PCMPs) voted in favour of the rules (GCMPs by 988 to 12 and PCMPs by 565 to 432).

- 59 The applicant has noted that the Rules may be amended at any time through the rule making process. Under this process, any NZEM participant may suggest a rule change. All such changes are referred to a working group for consideration, and if the working group recommends a change, that change is then considered by the Rules Committee. If the Rules Committee accepts the proposed change, it is then put to the vote by the relevant NZEM participants.
- 60 The NZEM Market Surveillance Committee has so far approved 33 companies as NZEM participants (see Appendix Three). They represent a large proportion of the generation and purchasing sectors of the electricity industry. Many of the power company purchasers of electricity are represented by agents such as PowerBuy Group Ltd, Pacific Energy Ltd and Energy Brokers Ltd, all of which are now NZEM participants. Other power companies and major purchasers of electricity are, according to EMCO, currently carrying out the procedures necessary to gain NZEM participant status.
- 61 With the implementation of the proposed NZEM Markets, a number of service provider functions will come into existence, including clearing manager, scheduler, dispatcher, pricing manager and reconciliation manager. These functions may be separate and contestable, but, at least in the short term, the roles of clearing manager and pricing manager are likely to be undertaken by EMCO.
- 62 The clearing manager will:
- calculate the day ahead and real time price of electricity (i.e. operate the pricing mechanisms);
 - purchase electricity offered and generated by GCMPs and on-sell this electricity to PCMPs; and
 - settle the sale and purchase of electricity on the Real Time Market, and issue invoices for that electricity, service provider fees and any other charges.
- 63 The Day Ahead and Real Time Markets will facilitate wholesale electricity trading as follows:
- The Day Ahead Market will provide a facility for the trading of day ahead electricity contracts.
 - The Real Time Market will provide a facility for the buying and selling of electricity. It will act as a 'spot' market for wholesale electricity trading.

The Day Ahead Market

64 The Day Ahead Market performs a similar function to long term forward electricity contracts that may be offered by any person, except that:

- the price that the hedge is set at is attained through the Day Ahead Market pricing mechanisms, rather than being set unilaterally by the party offering the forward electricity contract, or through some other process (e.g. bilaterally or through tendering);
- the hedge is only for the day ahead, rather for the longer periods generally available under other forward electricity contracts;
- clearing and settlement rules have been established, including prudential requirements; and
- the transaction is settled with the NZEM clearing manager, and not with the party offering the forward electricity contract.

The Real Time Market

65 The Real Time Market has the following characteristics:

- scheduling and dispatch based on simple price/quantity bids and offers;
- generation is scheduled for each trading period to meet the expected demand at the lowest cost (including losses);
- effects of reserves, losses and constraints are priced in the market;
- marginal location factors are determined daily for each half hour; and
- prices are established at each node of the transmission system. A node is a point of exit or entry on the national grid.

Pool By-Pass

66 The applicant states that although the Rules establish an electricity pool to provide for the spot trading of electricity, it will also be possible for generators and purchasers of electricity to buy and sell electricity independently of the pool. NZEM participants and non-NZEM participants are not prevented from entering into bilateral contracts for the delivery of electricity. The wholesale market encompasses both electricity trading undertaken through the Real Time Market and trading by bilateral contracts.

67 In order to make bilateral contracts feasible, however, arrangements need to be put in place to allow the reconciliation of “overs and unders” (i.e. the amount by which the electricity actually required is more or less than the amount specified in the contract). The applicant points out that the purchaser needs to be able to sell the

excess or purchase the shortfall electricity from elsewhere, and this is likely to be the pool.

DESCRIPTION OF ARRANGEMENTS FOR WHICH AUTHORISATION IS SOUGHT

The Pricing Mechanisms

The Day Ahead Market Pricing Mechanisms

- 68 PCMPs who participate in the Day Ahead Market bid to purchase a quantity of electricity at a given price, for a specific half hour period the following day. Similarly, GCMPs who participate in this Market offer to sell a quantity of electricity at a given price, for a specific half hour period the following day. A party whose bid or offer is accepted hedges itself against overnight changes in the price of electricity.
- 69 The Day Ahead Market is an institution where financial hedges against the ex post price of electricity are traded. However, participation in the Day Ahead Market is limited to generators and purchasers who either consume electricity or have contracts to supply electricity to final consumers. The quantity offered or bid will not be allowed to exceed a reasonable estimate of the quantity of electricity that is capable of being generated or will be purchased, in the period to which the bid relates, by each generator or purchaser respectively.
- 70 All bids and offers must relate to either the Benmore or Haywards substations. These are termed the reference points. The fact that there will be only two reference points means that the Day Ahead Market will not be able to be used to hedge against losses or constraints in the alternating current (AC) transmission network. However, Trans Power intends to introduce a hedge specifically for that purpose.
- 71 In terms of timing, bids will be submitted to the pricing manager between 9 am and 12 noon of the day prior to that to which the bid relates. By 1 pm of that day the pricing manager ranks all of the offers from generators from the lowest to highest, and the bids for purchasers from the highest to the lowest. Bids which have identical prices are ranked according to the chronological order of receipt.
- 72 The pricing manager then identifies the price at which the aggregate quantity of purchasing bids received at or above that price exactly equals the aggregate quantity of generating offers at or below that price. This is the clearing price.
- 73 If a clearing price for either reference point is not established but the lowest price purchase bid is higher than the highest priced generating offer (at the point where the aggregate purchasing and generating bids match), then the clearing price is defined as the average of those two prices. Purchasing bids above that price are cleared, and generating bids below that price are cleared.

- 74 If the highest priced purchasing bid is lower than the lowest priced generating offer, or if no purchasing bids or generating offers are received, then there is no clearing price and no contracts are formed.

The Real Time Market Pricing Mechanisms

- 75 The Real Time Market pricing mechanisms are used to calculate the final price of electricity traded through NZEM. The final price is calculated ex post and used by the clearing manager for invoicing and payment. The Commission has not been asked to authorise the computer programme which will be developed to determine this final price.
- 76 The applicant submits that the Real Time Market pricing mechanisms find ‘the intersections of a series of computer generated supply and demand curves for each half hour at each node’.
- 77 To determine the actual price, the applicant submitted that:
- “A [computer] model will be developed in accordance with the specifications set out in schedule 1 of part 2 of the Rules of NZEM. This model embodies a mathematical representation of the characteristics of the transmission system owned by Trans Power. The model essentially takes into account the ability of the different aspects of the transmission system (namely AC transmission lines, the HVDC link between the North and South Islands, and the various transformers that appear on the grid) to carry electricity. Taking into account these characteristics, the model uses input data [from the generators, purchasers and the grid operator] in an effort to maximise the gross PCMP benefit from the purchase of electricity less the total cost of production of electricity (as represented by GCMP offers) and instantaneous reserve (as represented by spot market participants). In economic terms, it maximises the sum of the consumer and producer surpluses at each geographic point.”
- 78 This model will also be used to schedule and dispatch electricity.
- 79 The final price at each node of the transmission system is calculated using the highest offer tranche required to meet the level of demand at that node. The price will vary between nodes in accordance with the marginal location factors for that trading period, which take account of losses on and constraints within the transmission system.
- 80 Purchasers are then invoiced by the clearing manager for the quantity of electricity consumed by the purchaser at each node, for each trading period, at the node-specific price. Similarly, generators will receive payment based on the quantity of electricity supplied at each node, for each trading period, at the node-specific price.
- 81 The invoices and settlement notices will include settlement of contracts formed with the clearing manager in the Day Ahead Market.

The Prudential Provisions

82 Section H of Part 2 of the Rules deals with clearing and settlement of Real Time and Day Ahead Market transactions. The application relating to the Real Time Market states that the prudential provisions applicable to PCMPs are an integral part of the clearing and settlement process.

83 The prudential provisions are contained in rule 2 of section H. The intent of the provisions is described in the Rules as “to ensure that purchaser class market participants can meet their financial obligations under these rules”.

84 The provisions state that each purchaser will either:

- maintain a long term credit rating of at least A3 (Moody’s Investor Services Inc.), A- (Standard and Poors Ratings Group), or B+ (AM Best); or
- pay a cash deposit; or
- provide a guarantee or letter of credit; or
- obtain a third party guarantee from a guarantor with a credit rating as above; or
- provide any combination of these securities; and
- provide power of attorney to the clearing manager to direct the grid operator or a local network operator to de-energise the purchaser.

85 The provisions set out a formula for the calculation of the amount of cash deposit, guarantee or letter of credit which must be provided. The formula is:

“average peak season day x number of days in settlement period x 1.1”

86 The average peak season day is the daily average amount paid by the purchaser in the peak month of that season of the preceding year. The season refers to winter, being May to September, and summer, being October to April. The number of days in the settlement period is 57.

87 The provisions also include a methodology for calculating the level of security for new NZEM participants, for changing the security level and for dealing with disputes regarding the security level.

The Metering Standards Rule

88 The application seeks authorisation of the adoption of metering standards pursuant to rule 6.8, section H, part 2 of the Rules.

89 Rule 6.8 states:

“Each metering installation will meet the standards and testing and calibration requirements set down for that type of metering installation as may be specified from time to time pursuant to MARIA.”

90 MARIA is an agreement administered by EMCO. It provides for the method by which electricity produced and sold by generators pursuant to bilateral supply contracts is reconciled with electricity purchased under those contracts. In addition, MARIA provides for a standard specification for, and audit function of, electricity meters.

91 MARIA came into effect on 1 April 1994. The parties to the agreement are EMCO, ECNZ, Trans Power, and a number of power companies and energy traders.

92 The part of MARIA which NZEM proposes to adopt sets out the requirements for standards, testing and calibration of meters. These matters are found in rule 7 of MARIA, schedule 3, and the relevant Codes of Practice.

93 Rule 7 of MARIA requires that each metering installation be capable of measuring and recording metering information during each half hour, that the information recorded be stored and available to the National Reconciliation Manager, and describes procedures for testing meters and procedures to be carried out when an inaccuracy in a meter is found.

THE COUNTERFACTUALS

Background

94 In carrying out an assessment of an application under s 58 of the Act, the Commission is required to assess the likely competitive effects of the arrangement in question, and any public benefits or detriments likely to result from the arrangement. This requires the Commission to determine a benchmark or “counterfactual” against which to measure the likely competitive effects and public benefits. The Commission makes a “with” and “without” comparison, rather than a “before” and “after” comparison.

95 The counterfactual is not necessarily the arrangement which might be preferred by the Commission or by others with an interest in the industry. The Commission does not have the mandate, nor the expertise, to be the market designer. The counterfactual is simply the Commission’s pragmatic and commercial assessment of what is likely to occur in the absence of the proposed arrangement.

96 EMCO and ECNZ suggested that the Commission, when undertaking its competition analysis, can adopt only a counterfactual which would not require authorisation under the Commerce Act. They considered that it would be impossible to know in advance whether a counterfactual which required authorisation would receive that authorisation. EMCO also suggested that if the Commission accepted counterfactuals which required authorisation, it would be possible for parties opposed to the application to suggest such an alternative

arrangement which is theoretically more appealing than the proposal in the application and, in that way, defeat authorisation.

- 97 Contact indicated that it believed that the Commission should not adopt variations of the proposal as the counterfactual, but rather must adopt an arrangement which is a stark contrast to the proposal. Its counsel stated that, in his view, while there was nothing which would automatically rule out the Commission from accepting a counterfactual which required authorisation, such a counterfactual would be an unsatisfactory basis on which to measure competition effects because of the uncertainty over whether it would be given authorisation.
- 98 On the other hand, Mr Copeland, for MEUG, argued that it is quite appropriate for the Commission to adopt a counterfactual which may require authorisation if such a counterfactual is more likely than any alternative.
- 99 The Commission does not consider that there is anything in the Act, or any precedent, which necessarily prevents it from adopting a counterfactual which requires authorisation. As discussed, it must adopt that which it considers is the likely situation without the proposed arrangement. If authorisation is considered likely, then the situation may be adopted as the counterfactual. If there is sufficient uncertainty about authorisation, then the situation may fail the “likely” test and therefore could not be adopted as the counterfactual.
- 100 Nevertheless, the Commission agrees with the underlying view of EMCO and others that the authorisation process is not intended to allow the Commission to fine tune particular proposals by, for instance, rejecting all applications until one is received which matches in detail the counterfactual arrangement which it finds the most appealing. Accordingly, the Commission believes that it is appropriate that the counterfactual it adopts be expressed in general terms, and that these terms describe what is pragmatically and commercially likely in the absence of the proposed arrangement.

The Counterfactual for the Day Ahead Market

- 101 In the draft determination, the Commission’s view was that if the proposed Day Ahead Market did not proceed, then it was unlikely that NZEM would offer such an institution. The Commission accepted the NZIER view that, in the counterfactual, generators, consumers and traders would search out counterparties and enter into deals for forward electricity contracts, at whatever prices and terms they could agree, but without the aid of the proposed Day Ahead Market.
- 102 Submissions made both before and during the Conference were either silent towards, or broadly concurred with, this view.
- 103 The Commission remains of the view that in the absence of the Day Ahead Market, trading of forward electricity contracts will occur, but not within such an institution operated by NZEM.

The Counterfactual for the Real Time Market

104 As noted above, when determining the counterfactual, the Commission must decide what is the likely arrangement if the proposed Real Time Market is not put into effect on 1 October 1996. In considering this matter, the Commission has recognised the important influence the Government has in the sector from, inter alia, its ownership interests at the generation and transmission levels of the industry. Further, the Commission has had regard to the views of the various interested parties as to what may be acceptable to them, and what may be practical in the absence of the Real Time Market.

105 The Government's position has been set out in a number of statements, including a policy statement of 8 June 1995 on pool development and governance. This said, in part:

“Where there is more than one electricity generator a neutral and transparent ‘pooling’ mechanism is required to ensure least cost co-ordination of dispatch and back-up generation.”

And:

“Any pooling arrangements should facilitate economic and technical efficiency in the electricity sector. Pooling arrangements should be developed in response to market need, with a balance of interests involved in the development of any rules, so that the outcomes are neutral and efficient.”

106 This statement gives support to the Commission's view that any counterfactual must be broadly acceptable to the different interests. A proposal which is unacceptable to either generators or purchasers, for instance, would therefore not be one which is likely to be put into effect.

Minimum Requirements of a Counterfactual

107 Any counterfactual must provide a practical means for the trading of electricity at the wholesale level. In the application, NZIER suggested that the minimum requirements for any counterfactual trading system must be:

“Agreed standards and grid operator rights for connection to and use of the network,

some agreed method for measuring and allocating property rights to power injected and taken from the grid,

a mechanism which enables supply and demand to be continually matched, and voltage and frequency standards to be met, without excessive or uncontrolled load shedding even during contingencies.”

108 These are considered separately below.

Physical Trading of Electricity

109 The Commission believes, from the information provided to it, that the likely alternative to a real time spot market of the nature proposed by NZEM would be a system where physical trading in electricity would be undertaken primarily by a

series of bilateral contracts entered into between individual generators and individual purchasers, with prices and conditions negotiated on an individual contract basis.

- 110 An important distinction between this arrangement and that being applied for is that the arrangement would be likely to lead to a range of prices which could vary with the particular circumstances of each buyer and seller. This contrasts with the Rules which would result in one price being established for all trades made through the pool within each half hour period.
- 111 The Commission accepts the view of NZIER that, initially, bilateral trading of physical contracts is likely to occur in an ad hoc way, but in time institutions such as trading posts or bulletin boards would emerge to facilitate trading in a more efficient manner.

Trading of Overs and Unders

- 112 As Dr Ruff, for ECNZ, pointed out, any realistic trading system must include a mechanism for buying and selling incremental amounts of uncontracted energy (referred to as “overs and unders”). Most of the interested parties appeared to accept that a pooling arrangement is by far the most practical and efficient means of dealing with overs and unders. The amount of overs and unders can only be determined after the event, and in these circumstances the market clearing price would logically be set on an ex post basis. In Dr Ruff’s opinion, such a pool would be most unlikely to evolve on its own.
- 113 In its suggested counterfactual, NZIER has the generator of last resort posting buy and sell prices for overs and unders. Its reason for suggesting this approach is that it avoids any possible risk that a pool pricing arrangement is in breach of s 30 of the Act. However, as discussed above, the Commission does not believe that a possible counterfactual arrangement must necessarily be ruled out because authorisation would be required before it could be put into effect. The Commission believes that it would be possible to construct a pool pricing arrangement which either does not breach s 30 or is capable of authorisation.
- 114 The Commission adopts a counterfactual which sees overs and unders traded through a pool, and the price set on an ex post basis.
- 115 The Commission believes that market realities would be likely to result in Trans Power setting up, administering and operating this pool. Trans Power’s statement of corporate intent obliges it to provide, inter alia, an efficient, reliable and secure national grid, while the nature and scope of its commercial activities include the facilitation of transactions between producers, energy traders, direct supply customers and other parties, on an “as required” basis by participants in the electricity markets to enable the efficient operation of those electricity markets.
- 116 The Commission notes that, at the conference, Mr Winthrop of Trans Power acknowledged that Trans Power could operate an overs and unders market if necessary.

Physical Allocation Agreement

- 117 As noted above, any system (bilateral or pool based) requires that there is a method of measuring electricity flows and ensuring that ownership of power injected into, and taken from, the grid is accurately determined. This requires that market participants enter into an agreement which NZIER has called in its suggested counterfactual a Physical Allocation Agreement (PAA). The PAA would deal with metering issues, transmission losses and constraints and would identify overs and unders.
- 118 The Commission accepts that a PAA is necessary for the counterfactual and believes that Trans Power would be best placed to administer such an agreement, at least initially.

Summary of Counterfactual

- 119 The Commission considers that the counterfactual to the proposed Real Time Market is the situation where most electricity is traded by way of bilateral contracts individually negotiated, where overs and unders are traded through a pool set up and administered by Trans Power, and that all participants be required to enter into a Physical Allocation Agreement which would be administered by Trans Power.

THE RELEVANT MARKETS

- 120 Analysis of a trade practice for the purposes of the Act requires that the activities affected by the practice in question are placed within market boundaries which most clearly highlight the competitive implications of the practice.
- 121 In this instance, the matters for which authorisation is sought affect the electricity sector. The competitive implications of the Rules will be highlighted most clearly by the manner in which electricity generators, wholesalers and retailers are able to trade electricity with each other.
- 122 In the draft determination, the Commission concluded that the markets relevant to the assessment of the Real Time Market pricing mechanisms, the prudential provisions and the metering standards rule were the national markets for the generation of electricity, the wholesaling of electricity, and the retailing of electricity to consumers who use in excess of the contestable consumption range of 0.1 - 0.5 gigawatt-hours per annum.
- 123 Further, it concluded that the market relevant to the assessment of the Day Ahead Market pricing mechanisms was that for the trading of forward electricity contracts.
- 124 Most parties at the conference broadly concurred with the Commission's assessment of the relevant markets. However, some pointed out that the contestable consumption range in the retail market is rapidly expanding to include consumers using a smaller amount of electricity than 0.1 gigawatt-hours per annum.

- 125 Two parties disagreed with the Commission's market definition. EECA sought to define markets in terms of traded electricity, electricity-related assets and energy services, and the Sustainable Energy Forum (SEF) argued that, in addition to the Commission's markets, a further market, that for new methods for avoiding or competing with generators (the 'distributed resources market'), was relevant.
- 126 While the Commission acknowledges that the contestable range of the retail market may be expanding, it does not believe that it has grown beyond the level referred to in the draft determination. In addition, the Commission does not consider that it is necessary to determine precisely the contestable range to assess these applications.
- 127 The Commission has considered the submissions of EECA and SEF. However, it remains of the view that the relevant markets are those adopted in the draft determination and it adopts those markets for the purpose of assessing the competitive implications of the rules for which authorisation is sought.

ASSESSMENT OF THE ARRANGEMENTS

The Pricing Mechanisms

Introduction

- 128 Pricing mechanisms, such as those which are the subject of the applications, offend against the Act either if they have the purpose or effect, or likely effect, of substantially lessening competition in a market in terms of s 27 or if they are deemed, by the provisions of s 30, to substantially lessen competition in a market.
- 129 The analysis below considers first whether the mechanisms fall within the deeming provisions of s 30.

Section 30

- 130 The applicant has sought authorisation for two pricing mechanisms, viz; for the Day Ahead Market and for the Real Time Market. It regards the application as necessary in view of the Commission's findings in Decision 277 that the interim pricing mechanisms fall within the ambit of s 30. However, the applicant considers that irrespective of whether the Commission was correct in its findings in Decision 277, the proposed pricing mechanisms fall outside s 30.

131 Section 30 provides:

Without limiting the generality of section 27 of this Act, a provision of a contract, arrangement or understanding shall be deemed for the purposes of that section to have the purpose, or to have or to be likely to have the effect, of substantially lessening competition in a market if the provision has the purpose, or has or is likely to have the effect of fixing, controlling or maintaining, or providing for the fixing, controlling or maintaining of the price for goods or services, or any discount, allowance, rebate or credit in relation to goods or services, that are -

Supplied or acquired by the parties to the contract, arrangement or understanding, or by any of them, or by any bodies corporate that are interconnected with any of them, in competition with each other; or

Resupplied by persons to whom the goods are supplied by the parties to the contract, arrangement or understanding or by any of them, or by any bodies corporate that are interconnected with any of them in competition with each other.

The reference in subsection (1)(a) of this section to the supply or acquisition of goods or services by persons in competition with each other includes a reference to the supply or acquisition of goods or services by persons who, but for a provision of any contract, arrangement or understanding would be, or would be likely to be, in competition with each other in relation to the supply or acquisition of the goods or services.

132 The section prohibits any provision of a contract, arrangement or understanding that has the purpose or effect, or likely effect, of fixing prices. Such a contract etc is deemed to substantially lessen competition in terms of s 27 of the Act. The deeming provision extends to provisions that have the purpose or have or are likely to have the effect of providing for the fixing, controlling or maintaining of the price for goods or services or any discount, allowance, rebate or credit in relation to goods or services.

133 There are, therefore, two key issues which must be addressed in considering whether s 30 applies:

- Do the provisions constitute a contract, arrangement or understanding between actual or potential competitors?
- If so, do they have the purpose or effect or likely effect of fixing, controlling or maintaining prices?

134 The first issue is often straightforward. The more difficult issue is whether the provisions have the purpose or effect or likely effect of fixing, controlling or maintaining prices or providing for the fixing etc of prices. This requires consideration of the meaning of the words 'fix', 'control' and 'maintain'.

135 The leading Australian case on identical provisions (s 45A of the Trade Practices Act 1974) is *Radio 2UE Sydney Pty Ltd v Stereo FM Pty Ltd* (1982) 4 ATPR para 40-318 (Federal Court) and (1983) 5 ATPR para 40-367 (Full Federal Court). In that case, two Sydney commercial FM radio stations, 2MMM and 2DAY, produced a combined Sydney FM rate card for advertisers on their two stations. The combined card was intended to draw the attention of advertisers to the potential advantage of advertising on the stations as their market shares had increased considerably since they had first gone to air. The rates appearing on the combined card were the sum of

the individual rates offered by each station for a spot of the relevant category appearing in its individual rate card. Each station fixed and charged its own rates independently of the other. 2MMM's rates were higher than those of 2DAY. Neither station consulted the other in compiling or changing its card and the rates on the individual cards were not always the rates actually charged to clients because bargaining took place and benefits given to clients included discounted rates. The combined card did nothing to reduce either station's flexibility to change its advertising rates whenever it wished to do so and 2MMM had done so.

136 Radio 2UE alleged that the contract between 2MMM and 2DAY in respect of the combined rate card amounted to a breach of s 45A (equivalent to s 30 of the Act). The Court held that it did not.

137 At first instance Lockhart J adopted a dictionary meaning of 'fix' and 'maintain'. His Honour commented on 'fix' at page 43,921:

"The *Shorter Oxford Dictionary* defines the verb 'fix' as : "To fasten, make firm or stable; ... to attach firmly; ... settle permanently." The *Macquarie Dictionary* defines the word as: "1. To make fast, firm, or stable. 2. To place definitely and more or less permanently. 3. To settle definitely; determine; *to fix a price.*" "

138 As for 'maintain', his Honour noted at page 43,921:

"The verb maintain is defined by the *Shorter Oxford English Dictionary* as: "to continue, persevere in; ... continue, preserve, retain." The *Macquarie Dictionary* defines as the word as: "1. To keep in existence or continue; Preserve; retain ...3. To keep in a specified state, position etc." In my view 'maintain' where used in section 45A, has a similar connotation to the verb 'fix' in that it involves some element of continuity, not merely being momentary or transitory. Generally, to maintain a price assumes that it has been fixed beforehand."

139 On appeal the Full Federal Court at page 44,401 observed:

"In our view the word 'fixing' in section 45A takes colour from its general context and from the words used with it - 'controlling or maintaining' - and not every determination of a price, following discussion between competitors, will amount to a price 'fixing'. There must, we believe, be an element of intention or likelihood to affect price competition before price 'fixing' can be established. This will often be a matter of inference, requiring no direct evidence for it to be established."

140 No Australian or New Zealand court has considered the meaning of 'control' in a price fixing context.

141 The Commission considered s 30 in *Insurance Council of New Zealand (Inc) Decision 236 (1989) 2 NZBLC (Com) para 99-522*. There the Commission adopted Lockhart J's meaning of 'fix' and 'maintain'. It said of 'control' at page 104,482:

“The word ‘control’ was considered in the case *TPC v Ansett Transport Industries (Operations) Pty Limited* (1978) ATPR para 40-071. Although considered in the context of a take-over/merger case the definition provided could have relevance to price movements. The meaning adopted was “to exercise restraint or direction upon the free action of; to hold sway over, exercise power or authority over; to dominate or command.”

- 142 The Commission summarised the phrase ‘fix, control or maintain’ at page 104,482 as follows:

“In all of the cases noted above, the terms ‘fix’, ‘control’ and ‘maintain’ are synonymous with an interference with the setting of a price, as opposed to allowing such price to be set in response to changes in the supply and demand for goods and services. Thus, in a technical sense any agreement by competitors in a market which has an influence on, or interferes with the setting of a price, amounts to ‘price fixing’. However, following Lockhart J for that interference to have any significance in a competition sense, the price that is fixed must not be “instantaneous or merely ephemeral, momentary or transitory or be the result of arrangements which merely incidentally affect it.” ”

- 143 The Commission concluded at page 104,483 that s 30 only applies to price fixing **in a competition sense** and that it is not sufficient for the provision under consideration merely to influence price. The Commission decided that the agreement in question did not contravene s 30. The Commission observed at page 104,483:

“Thus while the Agreement might have influenced the price of insurance, the Council having itself stated that the price of insurance sold by a signatory is different to what it would have been in the absence of the Agreement, the Commission is not satisfied that this amounts to ‘price fixing’ in a competition sense. The effect of the Agreement is to remove the cost element from the price, the price minus that element then moves in response to normal competitive pressures. Accordingly, the Commission considers that the agreement does not constitute the ‘fixing’, ‘controlling’ or ‘maintaining’ of the price of motor vehicle insurance in terms of section 30 and cannot therefore be deemed to ‘substantially lessen competition’ in terms of section 27.”

- 144 In *Insurance Council*, the Commission concluded that the agreement did not restrict buyers’ choice, as, once the cost element had been removed, the price for motor vehicle insurance moved in accordance with ‘normal competitive pressures’.
- 145 *Radio 2UE* also suggests some element of certainty (as to the level of price) is required for fixing, controlling or maintaining price. As each station set its own rates, and was free to change them independently, the aggregated rates had no certain price level.

Applying s 30 to the Proposed Pricing Mechanisms

Contract etc Between Competitors

- 146 ECNZ and Contact compete as generators. Some of the power companies compete against each other in the wholesale and retail markets. All the parties have agreed to the Rules. As the Rules (of which the pricing mechanisms form part) exist by agreement, they involve a contract, arrangement or understanding between competitors, and thus satisfy the first issue identified in paragraph 133 above.

Purpose

- 147 The second issue involves considering whether the pricing mechanisms have the purpose of fixing, controlling or maintaining price. The Commission has received no evidence which would indicate that such a purpose exists in this case. The purpose of the Rules is to establish an efficient, competitive wholesale electricity market. Amongst the vast array of material produced by the many people involved in the development of the Rules, there is nothing which the Commission has seen which would indicate that the Rules were established for any other purpose. The development of the Rules has been a relatively open and transparent exercise, involving both GCMPs and PCMPs, all of whom have some market power. Furthermore, both buyers and sellers can bypass the pricing mechanisms by entering into bilateral contracts. If the purpose of the pricing mechanisms was to fix prices, the NZEM participants who created the Rules would not have provided for such a bypass.

Effect

- 148 The second issue also involves considering whether the pricing mechanisms have the effect or likely effect of fixing, controlling or maintaining price.
- 149 Purchasers determine and place their price and quantity bids independently of each other. The actual amount of electricity consumed by any purchaser is outside the control of the other purchasers. Generators also place their price and quantity offers independently.
- 150 In addition, the rules relating to the pricing mechanisms place no limit or constraint on any party's bids or offers, which are capable of change.
- 151 The Day Ahead Market pricing mechanisms determine price by the intersection of supply and demand. Where the prices bid are higher than the prices offered (and, consequently, supply and demand do not intersect), rule 5.7 specifies that the clearing price is the average of the bid and the offer prices. This is a neutral, non-discriminatory process.
- 152 The Real Time Market pricing mechanisms put together generator offers and actual demand to determine the market clearing price. This is the market clearing price for all trades in each half hour period.
- 153 The Commission has seen no evidence that, over time, the prices established by the mechanisms would diverge significantly, on average, from the prices which might be established without the mechanisms.
- 154 The pricing mechanisms do not allow either GCMPs or PCMPs, acting independently or collectively, to predetermine prices. The price is set in response to, and would vary as a result of changes in, supply and demand. Accordingly, there is no element of certainty, continuity or permanence as to price resulting from the pricing mechanisms. The Commission concludes, therefore, that the pricing mechanisms do not have the requisite effect under s 30.

- 155 The Commission believes that it is possible to contrast the Rules with the interim rules. The interim rules did not have the same element of independence. Under the interim rules there were caps on the offer or bid prices. The offer price had to be cost based. The interim supply agreement between generators constrained their competitive behaviour.

Providing for the fixing etc of prices

- 156 The second issue also involves considering whether the pricing mechanisms provide for the fixing, controlling or maintaining of price. The Rules merely provide for the pricing mechanisms. The Commission is of the view that, as the pricing mechanisms do not result in the fixing controlling or maintaining of prices, they do not provide for it.

Conclusion

- 157 For the reasons described above, the Commission concludes that the pricing mechanisms do not fall within s 30.
- 158 The Commission emphasises, however, that those conclusions are reached because of the particular characteristics, features and nature of each of the proposed pricing mechanisms, and warns that its conclusions are not intended, and are unlikely, to be of general application beyond these proposals.

The Competitive Impact of the Day Ahead Market Pricing Mechanisms

- 159 As discussed above, the Commission has concluded that the counterfactual to the proposed Day Ahead Market is that NZEM would not offer such an institution. In these circumstances, firms wishing to reduce the risk they may face in the wholesale electricity market would lose one option to achieve this which would otherwise be available to them.
- 160 This would not necessarily mean that these firms would be unable to obtain day ahead hedges. The Commission believes that it is likely that demand for this product would be met other than by NZEM. A number of firms are likely to be interested in offering forward contracts for electricity, and there is no apparent reason why they could not offer day ahead hedges.
- 161 In its submission on the draft determination, MEUG argued that the existence of the proposed Day Ahead Market would lessen competition in the market for forward electricity contracts, ‘by limit[ing], suppress[ing] and inhibit[ing] competition from other existing or potential providers of forward electricity hedges’. It argued that this might come about through the possibility of the Day Ahead Market being cross subsidised by the Real Time Market, participation in which, it argues, it is difficult for industry participants to avoid.
- 162 The Commission sees nothing in the rules for which authorisation is sought that indicates that subsidisation of the Day Ahead Market by the Real Time Market is

likely. Further, it does not believe that the existence of an ‘official’ NZEM institution will limit the ability of other providers of forward electricity contracts to compete. Where there is demand for short term hedges that is not met by the Day Ahead Market, other providers will meet that demand. Nothing in the rules for which authorisation is sought appears to raise barriers to others providing this service.

- 163 Thus, in the counterfactual situation, it is likely that it will still be possible to acquire short term hedges from a number of sources. Nevertheless, there would likely be some lessening of competition compared with the situation if the proposed Day Ahead Market proceeded. EMCO appears to have the resources and expertise which other providers of hedges may not be able to match. Consequently, the absence of the proposed Day Ahead Market would be likely to lessen competition in the market for forward electricity contracts, to a small extent.
- 164 In these circumstances, the Commission has concluded that the proposed Day Ahead Market does not lessen competition, but rather is slightly pro-competitive compared with the counterfactual.
- 165 Accordingly, the Commission has concluded that there is no lessening of competition associated with the Day Ahead Market pricing mechanisms.

The Competitive Impact of the Real Time Market Pricing Mechanisms

Introduction

- 166 Parties opposed to the Real Time Market pricing mechanisms have expressed the view that the proposed pricing mechanisms lessen competition, essentially because the mechanisms adopt ex post, rather than ex ante pricing mechanisms. As a consequence, they argue, there will be a lessening in an opportunity for ‘demand side management’. They have pointed out that competition from demand side management was one of the Government’s policy objectives set out in the s 26 statement of 12 December 1995.
- 167 In addition to the demand side management effects, these parties have also claimed that the proposed pricing mechanisms would increase the likelihood of ‘gaming’ in the market. All of these claims are considered below.

The Benchmark

- 168 The competition impacts which are relevant to the Commission’s assessment of the Real Time Market pricing mechanisms are those which result from the difference between the proposed mechanisms and the counterfactual. The counterfactual which the Commission has adopted provides for physical trading of electricity through a series of bilateral contracts with prices being determined in advance of real time; that is, on an ex ante basis. Overs and unders would be traded through a pool with prices being determined after the event; that is, on an ex post basis.

- 169 While no evidence was presented on the extent to which the volume of sales of electricity on an ex ante basis would differ between the counterfactual and the proposal, the Commission believes that, in the counterfactual, there would be a greater volume of sales where the parties know the price in advance of real time.

Impact on Demand Side Management

- 170 Demand side management refers to the ability of electricity users to adjust the quantity of electricity consumed in response to price changes. As NZIER has stated, demand side management includes investing in technology, using electricity more efficiently, rescheduling the timing of electricity use (eg from day time to night time as is currently the case with ripple control of water heating loads), or simply doing without electricity when the value obtained from the use is less than the price.
- 171 Comalco has defined demand side management as:

“Any deliberate action by the purchaser (or demand side) that affects the energy demand of that purchaser in an effort to promote efficiency and/or lower cost, and this can include load shifting, peak demand shaving and interruptibility.”

- 172 Demand side management provides a means by which PCMPs can reduce consumption of electricity. This has an impact at all functional levels.
- 173 Demand side management is facilitated when users receive accurate pricing signals in advance of electricity consumption. Ex post pricing means that price uncertainty is not removed until after electricity is consumed. The sooner any uncertainty about prices is removed, the greater the scope for demand side management.
- 174 It is apparent that electricity consumers have different capacities to engage in demand side management on the basis of short term price signals. For instance, knowledge of high prices would allow most power companies to vary immediately electricity supply for domestic water heating. On the other hand, Mr Ross of Pan Pacific Forest Industries stated at the conference:

“What would somebody do in response to price signals four hours in the future? Because you do not know the price four and a half hours, six hours, or eight hours out you cannot really do much. You can only assume it might follow a pattern similar to yesterday’s or last week’s and decide to load manage on that basis.

Four hours ahead is not sufficient time to efficiently reallocate production schedules, labour, transport, in fact anything.”

- 175 The difference between the proposal and the counterfactual is likely to be limited to the amount of additional demand side management available with bilateral contracts in the four hour gap denied by the proposal because of the requirement for both generators and purchasers to commit to quantities in the NZEM pool four hours before actual delivery. In any event, it is apparent to the Commission that the proposed ex post pricing mechanisms do not remove the potential for short term demand side responses. Purchasers will have access to a range of price forecasts until very close to real time to which they can respond. Many will have an incentive to undertake their own forecasting based on their past experience.

176 In addition, purchasers will have a variety of hedging instruments available to them which will allow them to reduce or remove risk of unexpected price movements, and thereby to base their demand side management on prices fixed in advance. Also, they may be able to avoid any impediment to demand side management caused by the pricing mechanisms of the pool by entering into bilateral contracts with generators.

177 Further, it is noted that in the counterfactual, the overs and unders pool will play an integral role, and the price of electricity sold through this pool will also be set on an ex post basis.

178 Mr Copeland for MEUG, has noted:

“To the extent that ex post pricing with ex ante hedging opportunities is not a perfect surrogate for ex ante pricing, demand side management will be a lesser competitive constraint on generators.”

179 The Commission accepts the argument that the competitive impact of demand side management will be less with ex post pricing than with ex ante pricing. However, for the reasons discussed above, the Commission does not consider that it will result in more than a minor lessening of competition.

Impact on Gaming

180 Gaming refers to behaviour of firms in a concentrated market where they are able to utilise their knowledge of their competitors' likely market behaviour profitably to withhold supply to force prices above their competitive levels.

181 The most important influence on the ability to game a market is the structure of the market. The highly concentrated generation market, with only two significant generators at present, could provide the opportunity for gaming to occur. The Commission heard from Hon J K McLay, for EMCO, that some of the Rules were specifically designed to attempt to lessen the potential for gaming. Nevertheless, it appeared to be generally accepted that the possibility of gaming could not be ruled out, given the present competitive state of the generation market.

182 Comalco, Energy Brokers, MEUG and others suggested that the Rules would enhance the ability of ECNZ and Contact to engage in gaming. MEUG, for instance, argued that this is because the proposed Real Time Market pricing mechanisms are ex post rather than ex ante, and that as a result, the constraint on the pricing behaviour of the two generators is less than would otherwise be the case.

183 The Commission accepts that the more competitive the generation market, the less likely gaming is to occur. However, as discussed above, it is not convinced that demand side management, and the competitive consequences thereof, would be materially different under either the proposed pricing mechanisms or the counterfactual.

- 184 It is the Commission’s view that if there is any detrimental impact from the proposed pricing mechanisms on the ability to engage in gaming, it would be a reflection of a lack of competition in the generation market, and would not in itself be a matter which affects the level of competition. Consequently, while gaming may be relevant to any public benefit/detriment analysis (if that is required), it does not impact on the competition analysis.

Impact on Generation

- 185 EMCO has argued that if the pricing mechanisms were ex ante based rather than ex post based, generators (and particularly small generators without the range of plants available to ECNZ and Contact) would face a higher level of risk associated with unforeseen outages, and so on. EMCO has argued that this could have the effect of deterring new entry into electricity generation. As generation is highly concentrated at present, it has suggested that the loss of potential new entrants could have an important effect on competition in generation.
- 186 The Commission accepts that ex post pricing, compared with ex ante pricing, raises the risk faced by purchasers and lowers, by a roughly equivalent amount, the risk faced by generators. Consequently, ex post pricing in the proposal discourages, to some extent, demand side management, but also lowers the costs faced by generators. The competitive impact of the proposal on demand side management, which is discussed above, is considered to be small. The competitive impact of the proposal on the potential entry of new generators will also be small.
- 187 The Commission considers that the size of these opposing impacts would be likely to be broadly similar although, having regard to the fact that generation is highly concentrated, it believes that, compared with the counterfactual, the Real Time Market pricing mechanisms enhance competition.

Net Impact on Competition

- 188 In assessing the competitive implications of a trade practice which is the subject of an application, the Commission is required to take into account any pro-competitive effects as well as any anti-competitive effects. The High Court stated in *Fisher & Paykel Ltd v Commerce Commission* [1990] 2 NZLR 731 at 740:

“The majority correctly accepted that it had to “net out” the pro and anti-competitive effects and that, if it could be shown that the net effect of the EDC was to promote competition, then there could be no substantially lessening of competition in terms of s 27.”

- 189 In this case, the Commission concludes that the Real Time Market pricing mechanisms do not have the net effect of lessening competition.

The Competitive Impact of the Prudential Provisions

- 190 The purpose of the prudential provisions is described in the application as:

“to maintain the integrity of the market by giving generators confidence to sell into a ‘blind’ market, and purchasers confidence to participate in the market”.

- 191 The Commission agrees that electricity has special characteristics which give suppliers limited recourse to remedies in the case of non-payment. First, once electricity has been supplied, it is not possible for the seller to recover it. Second, in many instances, there would be serious social and political implications if a seller ceased supply (and the lights went off) in response to non-payment by a buyer.
- 192 The Real Time Market will be a 'blind' market where sales are made through the clearing manager, and neither buyers nor sellers know the identity of counterparties. Hence, market participants rely on adequate prudential requirements to ensure that transactions are fulfilled.
- 193 All interested parties appeared to accept that prudential requirements are necessary. Some parties, however, considered that the credit rating stipulated in the prudential provisions is too high and imposes an unreasonable cost on purchasers. MEUG submitted that the prudential provisions substantially lessen competition by raising entry barriers to those wishing to be PCMPs, and are also discriminatory.
- 194 The Commission accepts the view expressed by a number of interested parties that a purchaser is unable to avoid the costs of the prudential provisions by purchasing through a buying group or other intermediary. The Commission believes, however, that buying groups may have advantages through diversifying risk, thereby being able to negotiate more favourable rates when seeking to obtain letters of credit. No indication was given by the buying groups which made submissions on the draft determination or at the conference that they would be deterred from participating in the Real Time Market because of the prudential provisions.
- 195 MEUG referred to previous Commission determinations regarding rules for the operation of futures and stock exchanges. In those cases, the Commission recognised that the imposition of financial requirements on competitors in a market was potentially anti-competitive in that it might deter some firms from entering the market. In each of those cases, the Commission considered the actual levels of the financial requirements, and the impact of the requirements. The Commission has done the same in this case.
- 196 Information provided by EMCO indicates that the annual cost of providing a guarantee falls in the range of 0.25% - 1.0% of the sum guaranteed, depending on the risk of the particular purchaser. EMCO advised that, where it did not have evidence of a company's level of risk, the figures were based on a bank quote regarding the range of costs of providing a guarantee. Where the winter security level is less than \$1 million, EMCO estimates that the annual cost of the guarantee would range between \$4,400 and \$17,500 approximately. For the largest purchasers, with a winter security level greater than \$25 million, the estimated annual cost would range between \$290,000 and \$458,000.
- 197 ECNZ, in its submissions, commented that it would expect the cost to be at the lower end of this range for purchasers with adequate hedges in place and which use their own banks or join buying groups.

- 198 The counterfactual for the Real Time Market would also require prudential provisions, both negotiated as part of the bilateral contracts and imposed by Trans Power as operator of the pool for overs and unders.
- 199 It was suggested by Energy Brokers in its submission that in a wholesale market based on bilateral contracts, generators would compete for business on both price and the conditions in their contractual arrangements. ECNZ noted that its bilateral contracts include provisions such as guarantees from the line company, cash deposits and underwriting agreements. Prudential requirements incorporated in bilateral contracts would be likely to be more variable and less transparent than those proposed in the prudential provisions.
- 200 As well as prudential requirements in relation to bilateral contracts, purchasers would have to meet the requirements imposed by Trans Power as the operator of the overs and unders pool. Trans Power would take into account the risk of operating such a pool and would not be likely to impose requirements significantly different from those proposed in the prudential provisions.
- 201 The prudential provisions may encourage the entry of new generators by limiting the amount of risk which they would have to bear.
- 202 The Commission's view is that the levels of security which are imposed by the prudential provisions are not such as to deter potential purchasers to the extent that the wholesale market would be less competitive. The Commission has seen no evidence that, compared with the counterfactual, the prudential provisions for which authorisation is sought result in a lessening of competition in the wholesale and retail electricity markets.

The Application of s 29 to the Prudential Provisions

- 203 MEUG submitted to the Commission that the prudential provisions are an arrangement containing an exclusionary provision, that is they fall within s 29 of the Act.
- 204 Section 29 provides:
- “(1) For the purposes of this Act, a provision of a contract, arrangement, or understanding is an exclusionary provision if-
- (a) It is a provision of a contract or arrangement entered into, or understanding arrived at, between persons of whom any 2 or more are in competition with each other; and
 - (b) It has the purpose of preventing, restricting, or limiting the supply of goods or services to, or the acquisition of goods or services from, any particular person, or class of persons, either generally or in particular circumstances or on particular conditions, by all or any of the parties to the contract, arrangement, or understanding, or if a party is a body corporate, by a body corporate that is interconnected with that party; and
 - (c) The particular person or the class of persons to which the provision

relates is in competition with one or more of the parties to the contract, arrangement or understanding in relation to the supply or acquisition of those goods or services.”

- 205 The prudential provisions are an arrangement entered into between persons of whom two or more are in competition with each other.
- 206 The issue raised by MEUG relates to the purpose of the prudential provisions; whether they have the purpose of preventing, restricting or limiting the supply of goods or services to any particular person or class of persons.
- 207 The argument put forward by MEUG is that new entrant generators will also need to be purchasers of electricity, and will therefore have to meet the prudential provisions. Any new entrant generator will thus face an extra entry cost not faced by the incumbent generators. MEUG argued that it can be inferred from this that the generator class market participants have the purpose of deterring entry to the generation market.
- 208 No evidence was submitted to the Commission to substantiate this argument. Those parties with proposals underway to become generators have not indicated that the prudential provisions have any exclusionary purpose. To the contrary, they have in fact commented that the prudential provisions encourage the entry of new generators. For example, TransAlta’s submission states that the prudential provisions are important for facilitating independent power producers into the market.
- 209 The amount of security which a generator who also purchases electricity is required to provide reflects the amount of electricity likely to be purchased, which may not be a large amount if it relates merely to overs and unders and back-up. Contact and ECNZ are both purchaser class as well as generator class market participants. Accordingly, contrary to MEUG’s submission, the prudential provisions would apply to the incumbent generators in their purchasing operations.
- 210 The purpose of the prudential provisions, as stated in the application, is to protect the integrity of the ‘blind’ market, where buyers and sellers do not know the identities of counterparties. The Commission is of the view that no purpose of excluding new entry into the generation market can be inferred from the material before the Commission. As the Commission noted in the draft determination, the prudential provisions limit the amount of risk a new generator would have to bear. This appears to be a more significant factor than the cost of the prudential provisions to a new generator.
- 211 It is the Commission’s view, therefore, that the prudential provisions do not fall within s 29 of the Act.

The Competitive Impact of the Metering Standards Rule

- 212 The effect of rule 6.8 is that NZEM adopts the metering standards set out in MARIA, an agreement which came into effect on 1 April 1994.

- 213 Section 59(1)(a) of the Act states that the Commission shall not grant authorisation for any contract, arrangement or understanding if the contract, arrangement or understanding has already been entered into.
- 214 The Commission, in the draft determination, expressed doubts as to its jurisdiction to authorise rule 6.8 given that MARIA is already in existence. Subsequent submissions to the Commission have emphasised the point that the application for authorisation relates to the metering standard to be adopted by NZEM, which is not yet in operation. The fact that the standard being adopted (that in the MARIA agreement) is already in existence does not in itself prevent the Commission from authorising rule 6.8.
- 215 Having considered these submissions, the Commission accepts that authorisation is being requested for the linkage to MARIA created by rule 6.8, not for what is on the other side of the link. Accordingly, the Commission accepts that it is not precluded from authorising rule 6.8 by the provisions of s 59(1).
- 216 The adoption of the existing metering standard accepted by the electricity industry as a whole appears to the Commission to be logical. As EMCO noted in the application, a discrepancy in metering standards between MARIA and the Rules would give rise to distortions.
- 217 ESANZ commented in its submission that “there is sufficient self interest within the industry as a whole to ensure that metering standards are reasonable and that unnecessarily high standards are not imposed”.
- 218 No submissions were made to the Commission that rule 6.8 itself would result in any lessening of competition in any market.
- 219 The counterfactual for the Real Time Market places Trans Power in the role of administrator of a reconciliation agreement. As Trans Power is already the National Reconciliation Manager for MARIA, and the Trans Power connection contract requires all grid users to be signatories to MARIA, the adoption of rule 6.8 does not, in the Commission’s view, result in any lessening of competition in any market.
- 220 The Commission emphasises that its decision on this matter should not be taken as an endorsement of MARIA. Nor does it provide MARIA with any protection from possible action by the Commission or other parties under the enforcement provisions of the Act. The Commission recognises that it is possible that a common metering standard could lessen competition, and it proposes to continue to monitor MARIA, and to take appropriate enforcement action if it believes that it offends against the Act. Any proposed changes to MARIA which may possibly have an anti-competitive effect should be the subject of an application for authorisation, before the changes are implemented.

Summary of Competitive Impacts

- 221 The Commission concludes that none of the Day Ahead Market pricing mechanisms, the Real Time Market pricing mechanisms, the prudential provisions and the metering standards rule would lessen competition in a market.

CONCLUSIONS

- 222 The applications before the Commission seek authorisation for the Day Ahead Market pricing mechanisms, the Real Time Market pricing mechanisms, the prudential provisions and the metering standards rule.
- 223 For the reasons outlined above, the Commission concludes that none of these arrangements has the purpose, or has, or is likely to have, the effect, of lessening competition in a market. Nor are any of these arrangements deemed to substantially lessen competition in a market through the provisions of s 30. In addition, the Commission concludes that none of these arrangements is an exclusionary provision to which s 29 applies.
- 224 In view of these conclusions, authorisation of the arrangements is not required by the Act and the Commission does not have jurisdiction in terms of s 61(6) of the Act to authorise the arrangements.

DETERMINATIONS**Determination: Real Time Market Pricing Mechanisms, Prudential Provisions and the Metering Standards Rule**

- 225 The Commission, pursuant to s 61(1)(b) of the Act, determines to decline the application for authorisation of the pricing mechanisms set out in rule 4, section G, part 2; the prudential provisions contained in section H, part 2; and the adoption of metering standards pursuant to rule 6.8, section H, part 2 of the New Zealand Electricity Market Rules, on the grounds that they do not lessen competition and that, accordingly, authorisation is neither required by the Act nor within the jurisdiction of the Commission.

Dated at Wellington this day of September 1996.

The seal of the Commerce Commission
was affixed hereto in the presence of:

Dr A E Bollard
Chairman

Determination: Day Ahead Market Pricing Mechanisms

- 226 The Commission, pursuant to s 61(1)(b) of the Act, determines to decline the application for authorisation of the pricing mechanisms set out in rule 5, section A, part 2 of the New Zealand Electricity Market Rules, on the grounds that they do not lessen competition and that, accordingly, authorisation is neither required by the Act nor within the jurisdiction of the Commission.

Dated at Wellington this day of September 1996.

The seal of the Commerce Commission
was affixed hereto in the presence of:

Dr A E Bollard
Chairman

CONFERENCE PARTICIPANTS

Comalco Power (NZ) Ltd
Consumer Coalition on Energy
Contact Energy Ltd
Electricity Corporation of New Zealand Ltd
Electricity Market Company Ltd
Electricity Supply Association of New Zealand
Energy Efficiency and Conservation Authority
Energy Trusts of New Zealand
Major Electricity Users Group
Mercury Energy Ltd
Pacific Energy Ltd
The Sustainable Energy Forum
Trans Power New Zealand Ltd

NZEM PARTICIPANTS
as at 12 September 1996

Generator, Purchaser & Trader Class

- Central Electric
- Contact Energy
- Counties Power
- ECNZ
- Mercury Electricity
- National Power (Australia)
- Otago Power Limited
- Pacific Energy
- PowerBuy Group
- Stratford Power

Purchaser & Trader Class

- Buller Electricity
- Capital Power
- Carter Holt Harvey Energy
- Electro Power
- Energy Brokers
- MainPower New Zealand
- NorthPower
- ScanPower
- Southpower
- Tasman Energy
- Wairarapa Electricity
- WEL Energy Group Ltd

Trader Class

- Australian Gilt Securities
- Industrial Energy Ltd

Purchaser Class

- BHP New Zealand Steel Ltd
- Comalco Power (NZ) Ltd
- King Country Energy
- Marlborough Electric
- Methanex New Zealand Ltd
- Pan Pacific Forest Industries (NZ) Ltd
- Tasman Pulp & Paper
- TrustPower

Generator Class

- Waipori Power Generation