

**SUBMISSION**

**ON**

**COMMERCE COMMISSION  
AUTHORISATION APPLICATION  
FOR ELECTRICITY MARKET  
ARRANGEMENT**

**BY**

**TODD ENERGY LIMITED**

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## 1 EXECUTIVE SUMMARY

The Electricity Governance Board Limited (EGBL or “Applicant”) has put forward a proposed arrangement to be enforced between participants in the electricity industry for authorisation from the Commerce Commission. Under the Commerce Act 1986 (“Act”), an authorisation can authorise a party to enter into, or give effect to a provision of, an “arrangement”.

Todd Energy Limited submits that several aspects of the proposed arrangement contravenes the Commerce Act 1986. The detriment to the consumer would be significantly greater than any perceived benefit under the new arrangement as it imposes significant restrictions on trade practises and development of competitive elements.

The following conclusions are made:

1. The present three governance structure is inefficient, but delivers significant benefits compared to detriments.
2. Mandatory enforcement of some common issues such as common quality, switching and system security is required. However, other aspects of the present arrangements should be allowed to exist in the new arrangement.
3. There is no ‘free-riding’ by MARIA participants. Bilateral physical trading is a necessary element of efficient market operation and an industry requirement.
4. Parties achieve savings through MARIA bilateral trading by sacrificing other benefits received under NZEM.
5. The new arrangements will not deliver electricity to consumers at the least cost as they restrict competition.
6. Valid counterfactual to the proposed arrangement is the status quo or a single regulator governance of the present rules and trading practices.
7. The proposed governance structure gives no control to the independent Board to veto any new rules that may develop that don’t deliver on the Governments’ Policy Statements or guidelines to the industry.
8. The rule making process will be dominated by few large players and would restrict small niche players and competitive elements from developing.
9. The proposed arrangements contravene Section 27, 29 and 30 of the Act.
10. Net public benefit received under the proposed arrangement will be less than the detriment it will have on competition.
11. Penalty pricing and restriction of trade with non-members on rules other than as proposed is anti-competitive and contravene Section 30 of the Act.

12. Marginal pricing under a monopoly market constitutes monopoly profits. Authorising the new rules will mean that the Commission will be encouraging monopoly profits to be extracted from consumers.
13. The Commission will endorse the market power that exists in the present market due to marginal nodal pricing and lack of bilateral trading if authorisation is granted.

Todd Energy makes the following recommendations:

1. The Commission not authorise the proposed arrangements.
2. The Commission instructs the Applicant to change the rules to allow bilateral physical trading before seeking authorisation.
3. The Commission instructs the Applicant to change the structure in the rule making process to prevent dominant players controlling the process before seeking authorisation.
4. The Commission instructs the Applicant to allow trading to take place on actual or average losses basis before seeking authorisation.
5. The Commission advises the Applicant on ways to allow competitive elements to develop and exists under the new arrangement before seeking authorisation.

## **2 INTRODUCTION**

The Electricity Governance Board Limited (EGBL or “Applicant”) has put forward a proposed arrangement between players in the electricity industry for authorisation from the Commerce Commission. Under the Commerce Act 1986 (“Act”), an authorisation can authorise a party to enter into, or give effect to a provision of, an “arrangement”.

The Applicant already accepts that the provisions which set a price for services supplied by members to non-members under the proposed arrangement breach section 30 of the Act. It has sought Authorisations for this and other aspects of the arrangement that contravene Part II of the Act.

This report is from Todd Energy Limited and associated companies in reply to the application for authorisation by EGBL.

## **3 TODD ENERGY AND THE CURRENT MARKET**

### **3.1 Todd Energy’s Trading Operations**

Todd Energy Limited has interests in the following organisations.

- Bay of Plenty Electricity
- Freshstart Energy Joint Venture
- King Country Energy Limited
- Mangahao Joint Venture
- Kiwi Cogeneration Joint Venture

Todd Energy has acted as an agent for the above organisations in the New Zealand Electricity Market since 1 October 2000. Todd Energy is currently a member of the NZEM as well as MARIA, the two predominant trading arrangements in place for wholesale of electricity in New Zealand.

Todd Energy manages purchases and sale of electricity between the above parties at more than 60 different Grid Exit Points (GXP) in the North Island. This is generally known as ‘pooling’. It has put in place a number of bilateral contracts between itself across the GXPs in the MARIA bilateral contracting market to effect pooling of electricity. By operating in this bilateral contracting market, it is able to trade majority of the energy within the above group of companies without being exposed to counter party risk.

After pooling majority of the electricity (ie trading bilaterally within MARIA), Todd Energy trades any residual demand or generation in the NZEM market at the GXPs. Todd Energy pays d-Cypha as the service provider to NZEM as National Reconciliation Manager the following fees for its services under the pooling arrangement.

- Fixed GXP fee
- Fixed Pooling fee
- Variable Volume fee

- Load Following Generator transaction fee

### **3.2 MARIA versus NZEM**

All charges except the variable fee in MARIA are the same as per under the NZEM. However, the variable fee is lower than under NZEM as the scheduler/dispatcher component of this fee is separately invoiced and paid to Transpower NZ Ltd.

Todd Energy achieves savings by operating a pooling arrangement compared to trading all of the energy under NZEM because it is able to save some service provision fees such as the Clearing Manager fees. These savings are achieved as there is no requirement for the Clearing Manager to settle for the volumes traded under bilateral as settlement of these sums are carried out independent of the Clearing Manager. Thus, any savings are entirely due to not utilising those services. This is only possible because Todd Energy is able to find suitable counter parties it can trade with. Under NZEM a member is not required to seek a counter party. NZEM manages this and thus charges fees for this service.

Todd Energy disputes the notion the Applicant has put forward that at present parties trading under the MARIA bilateral trading arrangements are 'free riding'. As shown with a simple example of internalising the Clearing and Settlement costs in the MARIA trading arrangement, there is no free riding involved.

### **3.3 Generation dispatch under NZEM**

The question is why don't other players utilise the MARIA bilateral market to conduct majority of their trading and only trade the residual volumes under NZEM. The answer to this lies in the fact that NZEM provides the flexibility for large generators that MARIA does not provide. In NZEM, a generator is able to offer its generation for sale in blocks with a hurdle price before it will be dispatched. However, under MARIA, all generation is dispatched at a price of \$0. This means that a generator trading under the MARIA arrangement is always dispatched regardless of the price set by NZEM. This creates a tension between generators offering discretionary generation for sale and the same time promotes efficient use of that discretionary resource.

Such a mechanism is not always of value and is not practical for certain technologies such as geothermal plant, cogeneration, wind and run of river hydro where there is neither the discretion nor the ability to react to price. Thus it is entirely appropriate that these types of generation can be traded outside the gross pool as proposed.

The MARIA bilateral market is one of a physical supply on a bilateral basis. Financial settlement of the energy that is traded is a matter between the parties.

Todd Energy trades all of its generation from Mangahao Power Station under NZEM, even though it can trade bilaterally. The reason this is trading under

NZEM provides significantly more benefits to Mangahao as it is able to store water and price it accordingly. This is another example why bilateral trading under MARIA is not a market for free-riders. It serves a specific purpose in the industry.

The majority of industry participants who currently trade energy in the bilateral market do so for specific operational reasons. These include:

- The generator or supplier is a cogeneration plant that supplies steam to a large industrial site and the 'by product' electricity arising out of this efficient process needs to be dispatched. If any restriction is put on the electricity exported from the site, then this adversely affects the efficient operation and supply of energy to the factory.
- Some plants require guarantee of physical supply of electricity to avoid significant costs due to interruptions. Example is Comalco's Tiwai point smelter. Other than transmission related issues the supplier is providing a physical supply rather than a financial instrument for energy.
- Small run of river hydro stations that need to generate when water is available. These stations are unable to store water and as such would lose production and income if not allowed to run.
- Embedded generation plants that are sufficiently large to require arrangements with Transpower as Grid Operator but smaller than the demand at the node. These plants are typically minimising transmission requirements to the GXP or the region and thus operate to manage the demand levels at the GXP. Since demand is frequently fluctuating, the generator needs to be able to manage that profile. This then gives the added benefit to the rest of the system of a stable demand that can be easily managed by the system operator.
- New distributed generation schemes which are either much more efficient than the old thermal generation and or utilise renewable resources require flexible operating regimes. MARIA rules are more flexible in accommodating these new operations than NZEM.

Todd Energy has interest in three large cogeneration plants in New Zealand including the largest at Hawera supplying the Kiwi Dairy Factory. This factory alone earns more than 6% of New Zealand's total export earnings. It is economically inconceivable to restrict milk processing at the factory due to restrictions applied by the Electricity Market. The other two plants also supply energy to dairy factories as well as a gas treatment plant. Again, any disruption to these operations is economically damaging.

As a small niche operator in the current Electricity Market, Todd Energy sees significant operational flexibility in the current NZEM and MARIA trading arrangements. Especially the MARIA bilateral contracting market allows innovative trading arrangements to develop and foster small operators and thus increased competition.

As submitted by EGBL, the proposed new arrangements enforce significant restrictions on these operations and will have significant negative impact on the wider economy. Primarily, one of the key assumptions in the proposal is that the current MARIA bilateral market allows free riders and only serves the purpose of providing financial hedges to parties. As shown above, the current

MARIA bilateral trading arrangements provide for significant flexibility in operation to enable other industries that are dependent on electricity by enabling physical supply of energy across the grid. Parties trading under MARIA do sacrifice other services and benefits to receive the perceived savings. If it were possible to free ride, the market forces would dictate that most if not all parties would trade under MARIA. This is not the case and NZEM has 70% of the market share.

## **4 RELEVANT ASPECTS OF THE PROPOSED ARRANGEMENT**

### **4.1 Reasons for the arrangement**

In the authorisation, the Applicant has outlined a number of reasons for the proposed arrangement. These are listed below with Todd Energy's view.

- Inefficiency due to three different governance arrangements.

Todd Energy agrees that there are inefficiencies with three arrangements. However, some of the inefficiencies brought about by the governance structures are eliminated by the competitive effect they give rise to in the market. The existence of MARIA bilateral contracting provides a competitive benchmark for NZEM and vice versa. The existence of MACQS is a necessary component of system security and reliability and as such it has been developed over time.

- Free riding by MARIA participants.

As outlined in the previous section, Todd Energy disputes the Applicant's claim that MARIA parties are free riding. Parties trading under MARIA do sacrifice significant other benefits compared to NZEM participants. Fees paid by MARIA participants are commensurate with the service they receive from the grid operator.

The proposed new arrangement allows bilateral trading to occur only on a financial basis. This is not a credible alternative to a number of players in the industry. As has been shown in Section 3 of this report, bilateral trading is an integral part of Todd Energy and a number of other small operators in the market. This allows the entities to manage their physical supply of energy internally if they are self sufficient and only trade with third parties for the surplus amounts.

New Zealand Stock Market is an analogy where stocks are traded both through a broker (who is a member of the exchange) and as an off market trade on a bilateral basis. An off market trade has less costs associated with it as it does not involve any brokerage fees (similar to MARIA), while a trade through the broker will attract brokerage fees (similar to NZEM). There is no notion of free riding in this arrangement as the bilateral trade compromises some benefits that are received via the broker. These include, locating a suitable counter party, managing that risk, determining a fair value for the trade and managing the settlement. Though the Stock Exchange enables the discovery of the price and provides the 'market' the



liquidity on the stock, the bilateral trade is not prohibited as it encourages competition by allowing trading in an alternative environment.

Other information MARIA participants use from NZEM are the location factors between the nodes. The only reason members under MARIA trade their electricity on the same 'losses' basis ie marginal pricing based dispatch is because Transpower as grid operator and National Reconciliation Manager refused to allow dispatch based on average or actual losses. Most parties trading under MARIA would want to trade under an average or actual losses basis. Thus due to Transpower's refusal to allow dispatch based on actual losses, MARIA parties are forced to use the information that is derived out of the NZEM process and not because they want to as implied by free-riding.

- Uncertainty about transmission issues

Any transmission issue that has arisen since the commencement of NZEM in October 1996, will continue to repeat even after the implementation of the new arrangement (if authorised and agreed). Transmission issues alluded to by the Applicant are related to a lack of investment and the difficulty of investment recovery by Transpower. These are mainly borne out of Transpower's investment and contracting policies. These are not addressed in the proposed arrangement nor will they be resolved under the new arrangements.

- To deliver electricity to consumers at the least cost.

Generally, competitive markets will enable delivery of the product to consumers at least cost. This is achieved by various competing entities always endeavouring to seek new ideas, new technology and take risk to gain a competitive advantage. In the proposed arrangement, all competitive elements in the service provision component are eliminated assuming that the new 'club' will be able to purchase these services at least cost. ie Service Providers under the new arrangement are unable to offer similar services to non-members. They are forced to only offer the same service at a cost greater than that charged to members. This will prevent innovation and improvement in efficiency.

There is no provision for new innovative developments that may be more efficient to operate in the new arrangement. This is because the proposed arrangement would allow the governing body of the new entity to veto any resignations from the 'club' on the basis that the alternative arrangements are not to its satisfaction. Thus, if a party operating under the proposed arrangement develops a more efficient process for energy trading and reconciliation, it could be prevented from utilising it as it would not be allowed to resign its membership of the 'club'. Further, as a member of the 'club' it would be prevented from trading with any other entity (or itself) on terms and conditions other than as prescribed by the proposed rules.

Thus, the proposed arrangement is likely to have the effect of substantially lessening competition in the electricity market, and thus contravenes Section 27 of the Act.

## 4.2 Previous Applications to the Commission

The Applicant cites previous application in relation to the formation of NZEM and in particular seeking authorisation for the proposed pricing mechanisms, the prudential requirements and the adoption of metering standards. The Commission declined jurisdiction to consider the authorisation in Decision 280 on the basis that the provisions did not lessen competition.

The present application is significantly different to the application relating to NZEM. At the time of the NZEM application, MARIA was in existence. MARIA was a credible alternative and a competitor to the arrangements that were proposed under NZEM. However, the EGBL proposal will leave no alternatives to industry participants as it not only amalgamates NZEM and MARIA into a single entity but also removes bilateral trading. Unlike stocks, electricity is physically quantifiable and thus MARIA is a market for trading physical electricity. Limiting bilateral trading to only financial arrangements as proposed in the new arrangement will prevent parties developing alternative trading arrangements and thus development of competition.

Therefore, Todd submits that the Commission should not authorise the application as proposed, as it would substantially lessen competition.

## 4.3 Counterfactual

The Applicant admits that the proposed arrangement breach Section 30 of the Act. It further admits that various aspects of the proposed arrangement may be in breach of other parts of the Act. It is seeking authorisation from the Commission for the new arrangement on the basis that these breaches are acceptable compared to an alternative or Counterfactual.

The Applicant (Industry EGB) has relied heavily on the creation of a Crown EGB and assumes the following:

1. The Crown EGB will take the rules developed by the Industry EGB and enforce it on industry participants with minor changes to the governance structure.
2. Crown EGB cannot deliver on the Government's Policy Statement without completely revamping the existing arrangements (NZEM, MARIA and MACQS).
3. Crown EGB will not allow bilateral physical trading.
4. Crown EGB will not be able to co-ordinate system security issues without limiting trading arrangements.

Todd Energy submits that the most credible counterfactual to the new arrangement is:

1. Creation of a Crown regulatory unit (Regulator) that amalgamates the governance of NZEM, MARIA and MACQS. This has already been completed to some extent by NZEX (a project to amalgamate NZEM and MARIA which had progressed to publishing draft rules for comment) before it was aborted.

2. The Regulator would allow the present trading arrangements to continue.
3. The Regulator will make some modifications to effect the requirements arising from the Government's Policy Statement.
4. The Regulator would allow competitive elements in the market to exist.
5. The Regulator would co-ordinate and control the transmission issues to ensure the best outcomes are delivered to the consumers.

This would be the most expedient and efficient solution for the industry to deliver the desired outcomes. The proposed new arrangement is unable to enlist the support from the industry players for a mandatory market. Unlike a Regulator, it cannot enforce rules on all industry players. The existing arrangements have more buy in from participants than the proposed arrangements. Thus, a regulator is likely to use the option where there is wider acceptance.

The new arrangement needed to enforce certain common concepts from the policy statements such as switching, efficient dispatch and energy conservation. To achieve this it had to meet the requirements of the GPS, namely:

*“Compliance with the rules will be compulsory for generators, distributors, retailers directly connected end-users and Transpower, to the extent that they are applicable to these parties, and to the extent necessary to give effect to Government policy in this Government Policy Statement”*

However, by trying to enforce these rules on the entire industry, the proposed rules are also unnecessarily imposing restrictions on trading practises and thus development of competition. A Regulator on the other hand is able to enforce certain elements on all industry players and not enforce some other rules. Thus, a Regulator is unlikely to apply the same restrictions as the proposed arrangements.

Thus, it is Todd Energy's view that the most appropriate counterfactual for the new arrangement is the status quo or NZEX with a Regulator to rationalise only the governance structure. It is not the Crown EGB with the same rules as the Industry EGB.

If the counterfactual is different to the Crown EGB and is similar to a regulator controlling rules as designed within NZEX, it is evident that the proposed arrangements will impose significant new restrictions on competitive activity taking place in the marketplace. Thus, the proposed arrangement would contravene Sections 27 and 29 of the Act.

It is Todd Energy's view that authorisation if given should be given on the basis the current trading practices are not restricted nor participants restricted from trading with non-participants on terms other than as proposed in the new arrangement.

## **4.4 Governance**

### **4.4.1 Structure**

Todd Energy believes the existing three-governance structure arrangement is inefficient. This is because the three structures 'controlled' different aspects of the market. NZEM – trading, reconciliation, MARIA – Switching, trading, metering and MACQS – Common quality. It is important to note that the three arrangements did not significantly overlap on issues. The key factor of commonality was the ability for participants to trade under NZEM and MARIA on the basis of different rules. MARIA allowed bilateral physical trading while NZEM did not.

The flexibility of these arrangements and their ability to allow competitive trading to exist meant that the net benefit to the end consumer is significantly more than the detriment. However, rationalising the governance structure into a single governing body would be more economically efficient than at present.

The proposed arrangement rationalises the governance structures into a single governing body. It has also combined the rules from the three arrangements into a single set of rules where they were exclusive. However, in relation to the rules pertaining to trading (a key element of difference between MARIA and NZEM) there has been no attempt made to rationalise the rules. The new proposal simply have disregarded the MARIA trading arrangements and enforce the NZEM trading rules to all participants.

### **4.4.2 Rule Making Process**

Under the proposed arrangement, the rule making process is to be controlled by a body known as the Rulings Panel. This body is likened to the existing Market Surveillance Committee (MSC) of NZEM and the MARIA Conduct Committee (MCC). This body will have wide ranging powers such as the ability to levy a full range of sanctions including fines and compensation to participants. Other than the overall control of the compliance regime (which rests with the Industry EGB) the Rulings Panel will be the effective rule maker.

The key difference between the present arrangements and the new arrangement is that both the MSC and MCC are made up of independent representatives. However, the Rulings Panel will be made up of representatives of industry participants. With four major participants controlling a significant component of the market share (and thus the total voting rights) this panel is likely to be dominated and influenced by the large players.

The proposed rules also restrict trading practices from developing by preventing participants from dealing with non-members on terms other than the EGB rules. Typically in any industry, small players and new entrants who operate in niche environments introduce innovation. However, in the proposed arrangements, there will be no ability for new players to develop new arrangements as the existing members are not allowed to deal with them. Further, the Rulings Panel which is likely to be dominated by the large

players, is unlikely to relax the rules to allow innovative solutions to diminish their market power. Thus, innovation and competition among existing participants and new entrants with regard to new efficient trading practices would be stifled under the proposed arrangements.

Todd Energy is in support of the rationalisation of the governance structure into a single body. However, it does not accept that removal of bilateral trading as allowed in MARIA is required. Nor does it support the formation of a non independent Ruling Panel which will have effective control of the market operation. Therefore, it recommends that the Commission reject the application for authorisation as proposed.

## **5 ANALYSIS**

### **5.1 General**

The Applicant in its submissions states “As a general point, the Applicant submits that rules are not inherently anti-competitive, but may actually promote competition.” (Refer Paragraph 18.2, Page 58). It relies on Justice Brandeis’ decision in *Chicago Board of Trade v United States* (1918) 246 US 231, where the rule imposed on the grain market by the Chicago Board of Trade prohibiting members from purchasing or offering to purchase during the period between the close of the market and the opening of the session on the next business day at any price other than the closing bid of the market.

The judge disagreed with the Department of Justice who alleged that such a rule was anti-competitive resting on the argument that restricting trade to prices that are fixed by agreement is anti-competitive. He stated:

*“... The true test of legality is whether the restraint imposed is such as merely regulates and perhaps thereby promotes competition or whether it is such as may suppress or even destroy competition. To determine that question the court must ordinarily consider the facts peculiar to the business to which the restraint is applied; its condition before and after the restraint was imposed; the nature of the restraint and its effect, actual or probable....”*

The justice held that the rule was justified and did not restrain trade in any way.

The significant difference between the rule imposed by the Chicago Board of Trade and the one that is recommended by the Applicant is that, while the Chicago Board of Trade allowed trading of the grain outside of the market at the closing price, the proposed rules do not allow any physical trading outside of EGBL.

Todd Energy submits that by preventing any form of physical trading outside of the proposed market, the new rules are necessarily anti-competitive. Therefore, Todd Energy recommends the Commission not authorise the proposed arrangements as submitted.

## **5.2 Section 27, 29 and 30**

It is clear from the Applicants' own submission that it considers the new arrangements to be in breach of Sections 27, 29 and 30 of the Act. It relies heavily on the assumption that perceived pro-competitive efficiencies and net public benefit arising out of the new arrangements will enable the Commission to find that there is no breach of Part II of the Act.

Todd Energy submits that it has shown that a significant element of the present pro-competitive market is to be eliminated under the proposed rules and thus would create an effective monopoly that would control all physical trading of electricity in New Zealand. Consequently, the detriment to consumers due to lack of effective competition in energy trading would far outweigh the perceived benefits that would be received from purchasing of services under a 'club' arrangement as proposed.

A 'club' membership implies a comprehensive buy-in from participants, but a vast number of industry participants have raised significant concerns about the proposed rules. With the proposed voting structure, a simple majority that can be achieved by two or three large players in the present market, the rules will be enforced on all participants. For all intents and purposes, these rules would become mandatory if authorised by the Commission and be detrimental to the development of competition in the electricity industry in New Zealand.

## **5.3 Marginal Pricing in a Monopoly Arrangement**

The electricity market in New Zealand purchases electricity at one point and then sells it at another. In between the two points some losses may be incurred in transmitting the electricity. In microeconomics this is analogous to a firm purchasing raw materials or factors of production and then either transporting them and /or transforming them into finished products for resale to consumers. The electricity purchased from generators is then the factor. The finished product is the electricity sold to the consumer. The transmission of the electricity is the transportation or transformation required to produce the finished product. The productivity and loss of productivity involved in transmission is measured by the losses. If a line has 2 % losses then the line has 98% productivity. Similarly if a line has 4% marginal losses then the marginal productivity of the line will be 96%.

It is useful to compare the similarities and differences between the principals of competition and monopoly when applied to the same market. A rational firm will use increasing amounts of a variable factor if it can make money out of transforming it and selling it to consumers. If say two units of a factor are required to make one finished product (marginal product), then as long as the price of the finished product is twice as much as the price of the factors to make the finished product then the firm will increase profits by making more of the finished product. This means that the firms demand for the factor should increase until the marginal product of the factor multiplied by the price of the factor (which is called the "marginal value product" or MVP) is equal to the price of the finished product. Both a monopoly and a competitive market will maximise profits by demanding factors of production until the marginal value product of the factor is equal to the market price of the product.

The difference however between monopoly and competition is that the monopoly will demand significantly less of a factor than a competitive entity and/or the monopoly will pay less to the factor than the factor would receive if there was competition. If there is also a monopoly in the finished goods market then by maximising its marginal product, the monopoly will also demand a higher price and will sell less than compared to a competitive market. The quantity of the factors used, the marginal product of the factors, the price paid to the factors, the MVP of the factors, the prices of the finished product, and quantity are very different between monopoly and competition.

**Competition**

$$P_c = MVP_c$$

**Monopoly**

$$P_m = MVP_m$$

But  $P_c < P_m$

And  $Q_c > Q_m$

Where, P is price and Q is the quantity demanded.

Quantity demanded of a factor is greater under competition than monopoly,

The electricity market in New Zealand (NZEM) dictates the electricity price between different nodes on the grid and is hence dominant in both the factor generation purchasing market and the resale of the finished product market. The NZEM in fact prevents anyone trading across the grid without adopting its marginal price methodology (or the equivalent marginal volume reconciliation).

Because the NZEM is a monopoly the marginal value product ( $MVP_m$ ) and the finished product price determined under monopoly  $P_m$  is higher than under competition. The quantity a monopoly such as the NZEM supplies to the market  $Q_m$  is thus lower than under competition  $Q_c$ , and hence the derived demand for electricity generation (a factor) is less under the NZEM monopoly in comparison to the quantity and price that would prevail in a competitive market.

At present the MARIA market gives the opportunity for participants to use average prices rather than marginal prices. However, due to Transpower restricting the use of average prices (average losses), MARIA participants are also forced to use marginal pricing. It is possible to change this situation with lobbying and eventual rule changes.

However, the proposed arrangements seek authorisation to prevent bilateral physical trading. Thus, if authorisation is granted, the Commission will give rise to a monopoly entity extracting monopoly profits from all participants. There will not be an opportunity to use dispatch based on average or actual losses. The generators will permanently receive less for their generation and thus have a disincentive to produce more and the consumer will always pay for more for less quantity.

Appendix I includes a report that provides mathematical and economic proof of monopoly profit making that currently takes place in NZEM. This would be

endorsed by the Commission if the proposed rules are authorised. Therefore, Todd Energy submits that the Commission not to authorise the application for authorisation as proposed.

#### **5.4 Multiple Levels of Market Power**

The World Energy Council's recent report titled "Electricity Market Design and Creation in Asia Pacific", May 2001. The council has over 90 member countries and has carried out a detail investigation of the market design for electricity markets. The World Energy Council states:

##### *1. To Introduce Competition in Generation*

*Most electricity markets reform had concentrated on creating competition in generation and this was voted the highest priority objective to reform. It's successful introduction, however, requires that there be:*

- 1. Excess generation capacity of between 20-25% competitive pressures depend on the possibility of a generator not being able to operate for the bidding period concerned.*
- 2. An attractive investment environment – as competition in generation depends on having ample generating capacity, the investment to create it is a base condition of competition.*
- 3. High current prices in generation and supply – if prices are already close to cost, the introduction of competition, which itself has a cost, is unlikely to be cost-beneficial.*
- 4. The will to lower electricity prices – if, to the contrary, there is a need for steady or higher prices to pay of debt or add to capacity, then there are simpler ways to achieving the desired price profile.*
- 5. Easy access to the grid – transmission constraints will give rise to different competitive zones with those generators sheltered by a constraint able to demand higher prices.*
- 6. A well connected grid – transmission constraints will give rise to different competitive zones with those generators sheltered by a constraint able to demand higher prices.*
- 7. Many competing generators – while the exact number depends on the similarity of the generating plant, excess capacity must be greater than the each of the generating companies. With plants similar cost structure, five competitors may be sufficient, but with dissimilar plant ideally no company should represent more than 10% of the total capacity. Since price setting occurs throughout the full demand range, there need to be competitors at every demand level.*

*Absent even one item on this checklist, full competition in generation will not be possible, albeit it may be possible to introduce certain competitive pressures.*



*Especially in the absence of excess generating capacity, creating competition to construct additional capacity may be more urgent than creating competition in generation. Moreover, competition in generation will compromise competition construct capacity*

Source: World Energy Council, Electricity Market design and Creation in Asia Pacific, page one.

The World Energy Council state that “Absent even one item on this checklist, full competition in generation will not be possible.” The current NZEM is deficient in at least 5 out of the 7 items on the World Energy Council checklist.

The NZEM has only 10 to 16% excess generation at peak times.

The World Energy Council state that with dissimilar plant such as in New Zealand no company should represent more than 10%. Yet in New Zealand we have four companies Meridian (32%), Genesis (22%), Mighty River (15%) and Contact (22%).

While individually low excess generation or higher share of capacity than 10% is a serious problem, when both of these exist together there is no possibility of a competitive market. Low excess generation means that if any one generator is larger than the excess then the country will by definition experience a blackout without this generation. A clearer definition of market power will be hard to find. To avoid a blackout the market must pay the price demanded by the generator with this market power. There are four generators with this market power in the NZEM.

The NZEM market rule for establishing a price goes even further to enhance this market power of the generators. The NZEM price rule is that after sequencing the bid prices in order of price from lowest to highest the final NZEM price is the highest bid price that satisfies demand. As each of the four generators have capacity that exceeds the excess generation they each are essential to avoid a blackout. Each dominant generator can thus bid any price and in terms of the NZEM rules as the large generator is necessary to satisfy demand the “any price” is the NZEM price. If a dominant generator set \$1,000,000/MW at peak times the final NZEM price would clear at \$1,000,000/MW.

Todd Energy feels the current NZEM market is both anti-competitive and open to market domination by select few. The NZEM allows the dominant players unconstrained ability to exercise their market power at the expense of the consumers.

The proposed rules if authorised by the Commission will entrench this position and allow market power and dominance and abuse of the consumer to continue. Thus, Todd Energy recommends that the Commission not authorise the proposed arrangements.

## **5.5 Prices to non members**

In Paragraph 24.9 of its submission, the Applicant justifies its action of imposing a penalty on all non-members receiving services from members

stating that “..incurred due to the fact that members cannot be certain that the non-member will comply with security obligations and information provisions”. The assumption here is that members who chose to deal with non-members are incapable of judging the risk associated with trading with that counter party. Therefore, the Applicant imposes rules on its members restricting them from dealing with non-members and further applying a penalty on the non-member for the services provided.

An example is Todd Energy as a member of the proposed rules choosing to trade with an affiliated but separate company such as King Country Energy Limited (KCE). Though Todd Energy could be certain that KCE would comply with the conditions it imposes on KCE before agreeing to trade, the EGB still would enforce a penalty on KCE and or Todd Energy for carrying out the trade based on the assumption that trading with KCE imposes additional risk.

In the above example, the only party taking the risk is Todd Energy as it would have to ensure that KCE complies with the terms and conditions it imposes prior to agreeing to trade. Failure by KCE to do so may mean that Todd Energy would breach the EGBL rules. Therefore, Todd may seek a risk premium from KCE before agreeing to trade. However, under the proposed agreement, the market will collect the risk premium from KCE. Just as vertical integration allows price risk to be internalised, trading risk should be allowed to be internalised by allowing physical bilateral trading.

This is different to the present arrangement where parties trading under MARIA on a bilateral basis are charged a 10% penalty for trading any residual volumes directly with the Load Following Generator (LFG) in NZEM. There is no penalty on the actual volumes traded amount between the two parties (bilaterally traded volumes do not attract penalty). This may be acceptable, as the trade with LFG requires the Clearing Manager to settle those amounts while not having a contract. Todd Energy submits that as proposed, imposing a penalty on all trades with non-members will constitute a breach of Section 30 of the Act.

The counterfactual to the proposed arrangement as submitted earlier, is the formation of a Regulator that has the power to impose mandatory rules on all industry participants while maintaining the competitive elements of the present arrangements. Thus, the detriment (substantial lessening of competition) arising out of the proposed arrangement would be significantly more when compared with the counterfactual.

## **5.6 Perceived Public benefit**

The Application lists some net public benefits of the proposed arrangements relative to the counterfactual. It bases these benefits on the assumption that the counterfactual to be the Crown EGB that would have the same rules as the proposed rules. It has been shown that a more realistic counterfactual is a regulator that rationalises the governance structure, but allows continuation of the existing trading practices.

It is assumed that the Industry EGB as proposed would lead to efficient decision making because it has the necessary information and faces appropriate incentives compared to the Crown EGB. However, when

compared to the most realistic counterfactual, the proposed arrangement would not allow efficient decisions to develop. This is because it restricts trade with non-members and especially imposes a penalty on all trades with non-members.

The Applicant also submits that due to the possibility of alternative arrangements developing over time and attracting members away from the proposed arrangements, it would impose incentives on it to develop and maintain efficient rules. However, this pressure is unlikely to develop as parties would only be allowed to use an alternative arrangement if the EGBL determines to its satisfaction that the new arrangement satisfies its criteria. There would be no incentive for EGBL to find that any new arrangement meets its criteria, as it would lose its dominant position in the market. Therefore, it is more likely that the proposed arrangement would deter development of more efficient outcomes.

As outlined in the preceding sections of this report, Todd Energy sees a number of significant detriments arising out of the proposed arrangement. Todd Energy accepts that a single governing body such as the New Zealand Stock Exchange is more efficient in managing an industry than multiple governing bodies as at present with the current electricity industry in New Zealand. However, as proposed the rules impose significant restrictions on competitive market forces developing innovative strategies to improve efficiencies within New Zealand's electricity industry.

## **6 CONCLUSIONS AND RECOMONDATIONS**

Todd Energy Limited submits that the proposed arrangements contravene the Commerce Act 1986. The detriment to the consumer would be significantly greater than any perceived benefit under the new arrangement as it imposes significant restrictions on trade practises and development of competitive elements.

The following conclusions can be made:

1. The present three governance structure is inefficient, but delivers significant benefits compared to detriments compared to the proposed arrangements.
2. Mandatory enforcement of some common issues such as common quality, switching and system security is required. However, other aspects of the present arrangements should be allowed to exist in the new arrangement.
3. There is no 'free-riding' by MARIA participants. Bilateral physical trading is a necessary element of efficient market operation and an industry requirement.
4. Parties achieve savings through MARIA bilateral trading by sacrificing other benefits received under NZEM.
5. The new arrangements will not deliver electricity to consumers at the least cost as they restrict competition.

6. Valid counterfactual to the proposed arrangement is the status quo or a single regulator governance of the present rules and trading practices.
7. The proposed governance structure gives no control to the independent Board to veto any new rules that may develop that don't deliver on the Governments' Policy Statements or guidelines to the industry.
8. The rule making process will be dominated by few large players and would restrict small niche players and competitive elements from developing.
9. The proposed arrangements contravene Section 27, 29 and 30 of the Act.
10. Net public benefit received under the proposed arrangement will be less than the detriment it will have on competition.
11. Penalty pricing and restriction of trade with non-members on rules other than as proposed is anti-competitive and contravene Section 30 of the Act.
12. Marginal pricing under a monopoly market constitutes monopoly profits. Authorising the new rules will mean that the Commission will be encouraging monopoly profits to be extracted from consumers.
13. The Commission will endorse the market power that exists in the present market due to marginal nodal pricing and lack of bilateral trading if authorisation is granted.

Todd Energy makes the following recommendations:

1. The Commission not authorise the proposed arrangements.
2. The Commission instructs the Applicant to change the rules to allow bilateral physical trading before seeking authorisation.
3. The Commission instructs the Applicant to change the structure in the rule making process to prevent dominant players controlling the process before seeking authorisation.
4. The Commission instructs the Applicant to allow trading to take place on actual or average losses basis before seeking authorisation.
5. The Commission advises the Applicant on ways to allow competitive elements to develop and exists under the new arrangement before seeking authorisation.

## **APPENDIX 1**