



Final Determination

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**Electricity Distribution: Determination  
of Prescribed Services**

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*September 2000*

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**GLOSSARY**

ACCC	Australian Competition and Consumer Commission
the Authority	Queensland Competition Authority
the Code	National Electricity Code
CPI	Consumer Price Index
DNSPs	Distribution Network Service Providers
HHI	Hirschman-Herfindahl Index
IPART	Independent Pricing and Regulatory Tribunal, NSW
NCP	National Competition Policy
NEC	National Electricity Code
ORG	Office of the Regulator General, Victoria
QCA	Queensland Competition Authority
Tariff Order	Victorian Electricity Supply Industry Tariff Order

## 1. INTRODUCTION

The Queensland Competition Authority (the Authority) has a number of responsibilities with respect to electricity regulation, including the establishment of distribution prices for prescribed distribution services, as set out in the *Electricity – National Scheme (Queensland) Act 1997* and the National Electricity Code (the Code).

### 1.1. Requirements of the Code

Clause 6.10.4 of the Code requires the jurisdictional regulator (the Authority in the case of Queensland) to determine which, if any, distribution services are “prescribed distribution services”, and which are “excluded distribution services”.

Distribution services are defined under the Code as:

“the services provided by a distribution system which are associated with the conveyance of electricity through the distribution system. Distribution services include entry services, distribution network use of system services and exit services.”

Prescribed distribution services are defined by the Code as being:

“distribution services provided by distribution network assets or associated connection assets which are determined by the jurisdictional regulator as those which should be subject to economic regulation.”

Excluded distribution services are defined by the Code as being:

“distribution services, the costs of and revenue for which are excluded from the revenue cap or price cap which applies to prescribed distribution services.”

The definition of what constitutes prescribed services is therefore fundamental to the price review process, as it effectively determines which services are to be subject to economic regulation by the Authority.

In determining what constitutes prescribed and excluded services, the Code requires the Authority to have regard to:

- the principles for regulation of distribution service pricing described in clause 6.10.3, which in summary include:
  - concerns over monopoly pricing are to be addressed through the introduction of competition wherever efficient and practicable;
  - regulation must have regard to the need to provide incentives and opportunities to increase efficiency;
  - regulation must have regard to the need to provide a fair and reasonable rate of return to network owners; and
  - regulation should provide for reasonable certainty and consistency of outcomes over time;
- the extent of effective competition in the provision of the distribution service;

- whether sufficient competition exists to warrant the application of a regulatory approach which is more 'light handed' than the approach described in clause 6.10.5 (basically CPI – X);
- the effectiveness of the form of economic regulation specified under clause 6.10.5 in achieving the efficiency objectives included in clause 6.10.2; and
- the form, if any, of that regulation.

Once defined, prescribed distribution services are to be subject to regulation under the Code while excluded distribution services are those for which it may be appropriate to apply a more light-handed regulatory approach.

Section 5 of Schedule 6.6 of the Code (Appendix B) lists services and activities that may qualify as excluded distribution services.

## 1.2. Approaches taken in other jurisdictions

In Victoria, clause 5.7.4 of the Victorian Electricity Supply Industry Tariff Order (the Tariff Order) defined the following services as prescribed services:

- the transportation of electricity (except for electricity not consumed in the distributor's distribution system and electricity to high voltage customers (66kV or more) and the distribution of electricity to customers connected to specific existing connection points);
- the carrying out of works or the provision of maintenance or repair for the purpose of carrying out distribution of electricity; and
- the provision, installation and maintenance of any meters, switchgear or other electrical plant (except the provision of pre-payment meters to customers and the charges for the provision of metering to a standard in excess of that required for the billing of Network Tariffs).

The Tariff Order also included a list of excluded services for Victorian distribution entities based upon Schedule 6.6 of the Code.

By contrast, the Independent Pricing and Regulatory Tribunal (IPART), in its December 1999 Determination and Rules Under the National Electricity Code, defined prescribed distribution services as those services performed by each Distribution Network Service Provider (DNSP) that are associated with, or ancillary to, access to that DNSP's network for the supply of electricity within that DNSP's service area. IPART's June 1999 section 12A Pricing Report indicated that those services which are subject to effective competition will be eligible for exclusion, but that all network services were initially deemed to be prescribed distribution services, with exclusion to be considered on a case by case basis upon request.

In its January 2000 Decision on NSW and ACT Transmission Network Revenue Caps, the ACCC has effectively taken a similar approach, by deciding initially not to separately determine the value of assets generating unregulated income.

In developing its views on the determination of prescribed services, the Authority has undertaken a public consultation process including the release in May 2000 of a Discussion Paper setting out the issues and options relating to the separation of prescribed and excluded services, and the Authority's proposed approach. This Final Determination presents the Authority's determination of prescribed services for DNSPs, and the reasons for that

determination. Also included are the Authority's responses to the main issues raised in submissions to the Discussion Paper.

## 2 SUBMISSIONS

In May 2000, the Authority issued a Discussion Paper setting out the issues and options relating to the separation of prescribed and excluded services, and the Authority's proposed approach.

A number of submissions were received commenting on the approach proposed by the Authority in the Discussion Paper, and the definition of services that should be prescribed or excluded.

Submissions were generally supportive of the Authority's proposal to initially have all distribution network access services deemed as prescribed distribution services.

A number of submissions questioned the distinction drawn in the Discussion Paper between those types of prescribed services where competition does not exist and those where, while competition exists, it is not deemed to be effective. This distinction saw the Authority suggest that the latter might warrant a form of economic regulation more light-handed than for the former. Submissions argued that there was little merit in introducing such a distinction, calling instead for services to be treated as either prescribed or excluded, with no in-between arrangement. The Authority has decided not to distinguish between different types of prescribed services at this time, and will subject all prescribed services to the same form of economic regulation.

Submissions generally supported the option of parties in addition to DNSPs also having the right to apply on a case by case basis to have the Authority declare specific services as excluded services. It was argued that a DNSP will have an incentive, even where it no longer possesses substantial market power, to seek continued inclusion of those services until such time as it is assured of earning a rate of return in excess of the regulated rate.

On this basis, the Authority agrees that there must be an avenue whereby other interested parties can seek to have a service excluded in circumstances where the DNSP does not have the incentive to make such an application.

Some of the concerns expressed in submissions appear to be the result of a misunderstanding of the implications of a service being either 'prescribed' or 'excluded'. Namely:

- concern was expressed that a service treated as 'excluded' by the Authority may nonetheless still be subject to certain regulatory requirements under the *Electricity Act 1994*, thereby creating a legislative conflict. The Authority's view is that any declaration of a service as an excluded service only removes the limit on (and underwriting of) the rate of return that can be earned by a DNSP supplying such a service. It does not imply that the service is to be unregulated in any or all other respects;
- while supporting the notion that prescribed services should involve the 'standard regulated offer', it was suggested that, where a customer seeks to vary that arrangement, the negotiated arrangement should become an 'excluded service' as a general principle, and not be subject to economic regulation or tests of "effective competition". The Authority does not agree with this view, as the Code already provides for negotiable prices (and standards) within limits set by the regulated revenue/price cap; and
- it was suggested that all DNSP customers should have the capacity to have their service arrangements classified as a 'prescribed' or an 'excluded' service, in order that the service can be classified by the Authority as contestable. However, this view incorrectly assumes that declaring a service to be a prescribed service results in the DNSP being the sole provider of the service, and that other providers are somehow prohibited from offering such services.

On process issues, concern was raised as to whether the Authority’s intention is to conduct regular reviews of a service’s status (as ‘prescribed’ or ‘excluded’) and with respect to the detail of the process to be adopted by the Authority in managing applications for an excluded service. The Authority does not wish to be prescriptive at this stage about the format of any applications, or the timeframes to be met. However, the Authority will undertake its assessment of applications in an open and transparent manner, including thorough consultation with interested parties.

With respect to the Authority’s proposed approach to assessing the degree and effectiveness of competition outlined in the Discussion Paper, submissions generally expressed some misgivings.

The Discussion Paper was perceived to provide insufficient detail as to how the Authority would in practice define effective competition and how it would judge that there was sufficient competition to decide whether any services qualified as excluded services.

It was argued that the proposed principles for assessing the effectiveness of competition focussed too much on a DNSP’s role in the market and not enough on the market itself. It was also questioned whether the effectiveness of competition was the appropriate test, or whether something related to the more usual test concerning ‘substantially lessening competition’ in the market would be more appropriate.

Following the views put in submissions, and its own further consideration of the issues involved, the Authority’s final position aims to simplify the competitive test, by focussing solely on structural characteristics likely to give rise to substantial market power rather than also focussing on more problematic assessments of the ‘effectiveness’ of competition. Therefore, the Authority’s determined position is that *structural preconditions* for substantial market power are to be the focus of any test of whether a service is to be a ‘prescribed service’ or an ‘excluded service’, not whether there is evidence of abuse actually taking place. This is consistent with the Code, where economic regulation requires simply that a monopoly position be in evidence, not that there should also be evidence of the actual abuse of that position.

On the Authority’s proposed approach to market share analysis, while agreeing with the use of market share indicators as a generalised guide to determining if competition exists, one submission challenged the view expressed in the Discussion Paper that the “...existence of at least two vigorous competitors is usually considered critical to establishing the existence of a competitive market.” The Herfindahl-Hirshmann Index<sup>1</sup> was cited as requiring at least five relatively equally sized competitors to satisfy normal threshold requirements.

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<sup>1</sup> The Herfindahl-Hirschman Index (HHI) is based on the total number and size distribution of firms in the industry. It is computed as the sum of the squares of the relative size of all firms in the industry. Algebraically it is:

$$HHI = \sum_{i=1...n} (s_i)^2$$

where:

$s_i$  is the relative output (or other measures of economic activity such as sales or capacity) of the  $i^{\text{th}}$  firm; and

$n$  is the total number of firms in the industry.

For example, in an industry with one firm (monopoly), the HHI measure will be equal to 1. In a duopoly with two equal sized firms, the HHI measure will be:

$$(0.5)^2 + (0.5)^2 = 0.50$$

After considering a number of options, the Authority has decided on the use of a 40 per cent market share as an indicative threshold, as discussed in Appendix A. Unless analysis of the actual barriers to entry in a particular case demonstrates that a contestable situation exists notwithstanding a higher market share, an excluded service will require that a DNSP has less than a 40 per cent current market share. However, a market share of less than 40 per cent does not guarantee a contestable market exists (and hence that a service should be excluded), but rather indicates a market share level below which an interested party would need to present prima facie evidence that a contestable market does not exist before the Authority would undertake a more detailed investigation.

With respect to the definition of ‘the market’, concern was expressed about the apparent range in market scope between all of Queensland at one extreme and part of a DNSP’s area at the other. The Authority’s position remains that the market scope will vary from service to service – the position typically taken by competition authorities worldwide – with some services being of a nature where the two Queensland DNSPs may be competing against each other, and other services being of a nature where a single DNSP may have an effective monopoly in part but not all of its geographical service area.

### 3. SUMMARY OF THE AUTHORITY'S APPROACH

The Authority has decided to adopt an approach whereby:

- initially, all services performed by each DNSP that are associated with, or ancillary to, access to that DNSP's network for the supply of electricity within that DNSP's service area are to be declared as 'prescribed services' and therefore subject to economic regulation by the Authority; and
- DNSPs, or any other interested party, may apply on a case by case basis to have specific services treated as excluded services where it can be demonstrated that the market for such services is 'contestable', that is subject to potential – if not actual – competition.

Any case put to the Authority for a service to be treated as excluded, will need to provide evidence that there is a contestable market for that service.

A contestable market will be determined to exist if:

- the market is one where the DNSP does not have substantial market power, that is, the DNSP does not dominate the market – in the absence of evidence to the contrary, this will be assumed to be the case where the DNSP has a less than 40% market share; or
- the market is nonetheless contestable (that is lacks significant barriers to entry).

The following sections of this determination discuss in detail:

- the definition of initially prescribed distribution services;
- the key characteristics of excluded services;
- the process for applying for excluded service status;
- the effect of a service being prescribed; and
- the Authority's contestability test.

#### **4. PRESCRIBED DISTRIBUTION NETWORK ACCESS SERVICES**

Distribution network access services relate to:

- the transportation and delivery of electricity;
- the carrying out of works or the provision of maintenance or repairs for the purpose of carrying out transportation of electricity; and
- the provision, installation and maintenance of any meter, switchgear or other electrical plant essential to the transportation and delivery of electricity.

The initial presumption underpinning the Authority's approach to determining prescribed services is that the above services provided by a DNSP are subject to certain market barriers to entry which make their provision in a particular geographical area a 'natural monopoly', and therefore result in market power accruing to the DNSP.

Unless insurmountable difficulties arise in the allocation of joint or common costs and assets between regulated and non-regulated activities, a service provided by a DNSP which does not qualify as a distribution network access service should be excluded from the revenue or price caps determined by the Authority.

## 5. CHARACTERISTICS OF EXCLUDED SERVICES

A distribution network access service may only be granted excluded status where it satisfies the Authority's operational guidelines set out below. Under these guidelines, onus is placed on the applicant to provide the Authority with the evidence required to justify the exclusion of specific services.

Drawing on the requirements of the Code and the experiences of other jurisdictions, the Authority's basic approach to determining whether a service qualifies as an excluded service is to determine whether the DNSP possesses substantial market power in the market in question.

- Only if the DNSP is found to lack substantial influence in the market (specifically the ability to raise prices above the efficient costs of supply or earn an excessive rate of return based on efficient operation and investment), will the service be defined as an excluded distribution service, and not be subject to economic regulation.
- If the DNSP possesses substantial market power in the relevant market, the service will remain as a prescribed distribution service subject to some form of economic regulation by the Authority under the provisions of the Code.

The next section provides a detailed discussion of the types of information that the Authority will require prior to determining whether a service qualifies as an excluded service under these guidelines.

## **6. APPLYING FOR DECLARATION OF AN EXCLUDED SERVICE**

Where a DNSP or any other interested party wishes a specific service to be treated as an excluded service, they must make an application to the Authority. Each application will be assessed on a case by case basis and will need to provide detailed evidence justifying the service's treatment as an excluded service in line with the Authority's Contestability Test for Excluded Services (Appendix A). In particular, the application must:

- define the market; and
- demonstrate that the current level of competition or, alternatively, the lack of significant barriers to entry mean that the DNSP lacks substantial influence in the market.

The Authority will then investigate the application and make a determination as to the regulatory status of the service.

**7. EFFECT OF A SERVICE BEING PRESCRIBED**

The Authority, in determining that a service is (or remains) a prescribed service, does not:

- prohibit such services from being provided by suppliers other than the DNSP;
- regulate the terms and conditions on which such services are provided by third parties; or
- restrict/eliminate the scope for negotiation of prices and/or the standard of service provision.

All that prescription means is that the rate of return which DNSPs can plan to earn on such services is both guaranteed and limited to a regulated maximum rate in the first year of a regulatory period with subsequent years limited by the regulatory incentive regime adopted by the Authority. The rates of return which DNSPs can earn on excluded services are not constrained to any regulated maximum, but are constrained instead by competition and the risk of competition.

Services for which the relevant market is contestable must be excluded from the Authority's revenue/price caps. Otherwise, the DNSP will be guaranteed a rate of return on its activities in the contestable market, irrespective of its efficiency or success in that market.

Exclusion of services only requires that the assets and costs associated with the delivery of those services be excluded from the asset and cost bases used for the purpose of determining the revenue or price caps to apply. Where joint assets or costs are involved, an appropriate allocation mechanism is required.

## **APPENDIX A - CONTESTABILITY TEST FOR EXCLUDED SERVICES**

Competition exists in a market where firms or sellers independently strive for the patronage of buyers in order to achieve their business objectives, such as profit or market share maximisation. Competition is an important process by which firms are forced to become efficient and offer greater choice of products and services at lower prices.

Economic regulation has no role to play where effective competition exists. Where a DNSP or a competitor of the DNSP can establish that effective competition exists in a market served by that DNSP, the Authority is prepared to exempt the services involved from economic regulation by determining the services to be 'excluded services'.

### **Role of substantial market power**

Only where a DNSP dominates a market – in that it enjoys a position of economic strength such that it can behave to an appreciable extent independently of its competitors and customers – does economic regulation have a role to play.

If it so chooses, a firm with substantial market power is able to provide a lower level of service quality or choice, charge a higher price or undertake inefficient investment or operating expenditure, without necessarily suffering a decline in profit. In other words, the firm may be able to:

- charge prices which equate to a higher than expected rate of return on assets over the medium to longer term; or
- earn an excessive rate of return, based on efficient operation and investment; or
- allow service quality to decline to a level below that which might be expected in a competitive market; or
- impose onerous terms and conditions on customers.

If an incumbent firm (like a DNSP) possesses substantial market power, this does not mean that it is abusing – or will abuse – that market power. However, it does establish the grounds for economic regulation aimed at preventing cases of abuse from arising. Such services must continue to be 'prescribed services' for the purpose of the Authority's price regulation activities.

### **Define the market**

A firm may be considered to have substantial market power if its behaviour is not subject to the disciplines competitive markets normally impose.

Determining whether a DNSP has a dominant position with respect to the services it provides – whether or not those services are associated with, or ancillary to, access to a DNSP's network – must be done by reference to a defined market.

A market for a service includes all services that are in close competition or rivalry with that service. The definition of a market needs to address the following dimensions:

- alternative services or substitutes which can be used instead of the incumbent's products or services;
- the geographical region within which alternative sources of supply may be found; and

- the period of time necessary for an effective competitor to enter the market.

#### *Services comprising a market*

The market comprises services which are substitutes for the service in question. The degree of substitution depends on:

- the extent to which services are direct substitutes. For example, two entities providing the same basic service, or indirect substitutes such as the supply of electricity versus supply of gas;
- the current prices for the alternate services; and
- the willingness of customers to change supplier and possibly incur switching costs in doing so.

Each of these factors will be important in determining which services are considered to be substitutes and are therefore potentially in competition with the service in question.

#### *Geographical region*

The geographic dimension of the market is defined by the feasibility of obtaining alternative services from elsewhere.

One major factor which affects the geographic dimension of the market is the cost of transportation associated with alternative sources of supply. For example, high density urban areas readily support a competitive market for contract distribution maintenance services. In direct contrast, the only provider in low density rural areas is likely to be the local DNSP as travel costs preclude out of area contractors offering a competitive service.

#### *Time*

The time dimension refers to the period of time necessary for an effective competitor to enter the market, and defines the time period over which substitution possibilities ought to be considered for the purpose of defining the market.

However, if a potential competitor requires significant new investment that may take some time to establish in order to enter a market, then it would not normally be included in the relevant market definition.

### **Identify the level of competition**

Once the market has been defined, the principal factors that assist in determining if competition exists are the presence, or absence, of vigorous competition in the market together with barriers to entry for potential new entrants to the market.

#### *Market share*

A firm's market share indicates the relative size of the firm in the market in question in terms of the proportion of total output or sales or capacity it accounts for. Market shares form the basis of various measures of dominance or industry concentration (such as the Herfindahl-Hirschman Index).

High levels of market share may bestow market power on the dominant firm.

Therefore, a firm's market share provides an initial indicator of the competitive pressures in a market. Generally, a dominant firm is one that accounts for a significant share of a given market and has a significantly larger market share than its next largest rival. The Authority has adopted a market share of 40 per cent as the minimum level necessary to establish a *prima facie* case that a DNSP is in a position of dominance.

This is the threshold adopted in the ACCC's Merger Guidelines to define a situation of 'unilateral market power', which the ACCC describes as being similar to the concept of single firm dominance.<sup>2</sup> The unilateral exercise of market power requires that a dominant firm has sufficient control of the market, such that it can profitably 'give less and charge more' without being threatened by competing suppliers. For undifferentiated products, this normally requires that a firm controls a substantial proportion of the capacity in a market.

The ACCC considers its threshold to be at higher levels of concentration than those used in overseas jurisdictions. For example, while the US Department of Justice and Federal Trade Commission's 1992 Horizontal Merger Guidelines employed the Hirschman-Herfindahl Index (HHI), they imply a single firm market threshold of 35 per cent. The Canadian regulator adopts a similar threshold. However, a 40 per cent threshold is employed by the New Zealand Commerce Commission under a dominance test.<sup>3</sup> The Commission of the European Union has taken the view that a dominant position can generally be taken to exist when a firm has a market share of 40-45 per cent.<sup>4</sup>

In the Industry Commission's review of the ACCC's draft Merger Guidelines it was proposed that the ACCC look at the possibility of increasing the threshold market share for an individual merged firm from the present 40 per cent to 50 per cent.<sup>5</sup>

Therefore, the 40 per cent threshold chosen by the Authority has strong precedents.

The Authority's use of a quantitative threshold contrasts with the position it took in its earlier *Monopoly Criteria* paper where the Authority opted not to use a minimum threshold when assessing whether a government business activity qualified as a 'government monopoly business activity'.<sup>6</sup> While the Authority did not feel the need to define a threshold for its own purposes, it is now responding to requests in submissions that some practical guidance be provided to parties wishing to apply for the exclusion of certain services. The Authority acknowledges that a threshold can provide useful guidance when the onus is on applicants (be they DNSPs or other parties) to demonstrate whether market dominance exists.

The Authority will use the threshold on the same basis as the ACCC. The ACCC uses the threshold as a guide to the market share below which a firm is unlikely to be declared to be in a dominant position, rather than a fixed threshold above which a firm is necessarily declared to be in a dominant position. As explained further below, where a DNSP's market share exceeds the threshold, the Authority will require detailed consideration of the barriers to entry relevant to the market before declaring the DNSP to be in a dominant position and the service provided as a 'prescribed service'. It should also be noted that a market share below 40 per cent does not preclude the DNSP from being declared to be in a dominant position but rather indicates a

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<sup>2</sup> Australian Competition and Consumer Commission (ACCC), *Merger Guidelines*, AGPS, Canberra, June 1999, s. 5.95.

<sup>3</sup> ACCC, *Merger Guidelines*, AGPS, Canberra, June 1999, s. 5.95.

<sup>4</sup> See Sally Van Sclen, "Background Note", *Abuse of Dominance and Monopolisation*, Competition Policy Roundtable No.8, OECD, 1996.

<sup>5</sup> Industry Commission, *Merger Regulation: A review of the draft merger guidelines administered by the Australian Competition and Consumer Commission*, AGPS, Canberra, June 1996, pp. 36-37.

<sup>6</sup> The Queensland Competition Authority, *Criteria for the Declaration of Government Monopoly Business Activities*, 1997.

market share below which an interested party would need to present prima facie evidence of a lack of contestability in the market before the Authority would undertake a detailed investigation.

### *Barriers to entry*

Even if a DNSP's market share is high, the exercise of market power is only possible if there are factors such as barriers to entry. If the entry of new competition would rapidly and effectively constrain a price increase, then a dominant firm cannot exercise market power even in a concentrated market.

Timely and sufficient entry can obviate concern about the ability of a dominant firm to raise prices above reasonable levels or earn a return that would be excessive were it not operating inefficiently, by assuring that increased supply from independent sources will defeat efforts to exercise market power. If entry is quick (and the costs of entry are recoverable if the entry does not succeed), the exercise of market power is unlikely even if there is only one current supplier.

Actual competition may therefore not be important in determining the existence of a 'contestable' market. A fully contestable market is one in which:

- there are no barriers to entry or exit;
- all firms, both incumbent and potential entrants, have access to equivalent production technology;
- there is perfect information on prices, available to all consumers and firms; and
- entrants can enter and exit before incumbents can adjust prices.

A contestable market may have any number of firms (including only one or a few) and the dominant incumbent will maintain prices close to the competitive level because of the threat posed by potential entrants.<sup>7</sup>

Establishing whether a market is contestable is therefore of considerable importance. An analysis of the applicable barriers to entry is essential in this regard. Barriers to entry are factors which prevent or deter the entry of new firms into an industry even when incumbent firms are earning excess profits.

The Authority's focus will be on structural barriers to entry arising from basic industry characteristics such as technology, costs, demand and government erected statutory or regulated barriers. A barrier to entry can be any factor which discourages new entry into a market, so that incumbents are not faced with the threat of competition. Barriers to entry can include:

- sunk costs, such as those costs incurred in entering a market that cannot be recovered if entry fails.<sup>8</sup> In assessing the significance of sunk costs, it is not just the amount that is important, but also the length of time before these costs can be expected to be recovered. Examples of sunk costs include infrastructure construction, staff training and advertising and promotional costs associated with establishing a recognised presence in the market;

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<sup>7</sup> If incumbents raise prices, entry will occur (no barriers to entry), and the entrants will be able to produce as efficiently as incumbents (access to technology). Moreover, if price declines as a result of the entry, the entrant will be able to exit the industry quickly and costlessly (no barriers to exit).

<sup>8</sup> Sunk costs are an important barrier to entry in infrastructure industries. Since such costs must be incurred by entrants, but have already been borne by incumbents, a barrier to entry is created.

- legal or regulatory barriers, such as licensing requirements or legislated monopolies. An example of a potential regulatory barrier would be the requirement to obtain a retailing licence in order to sell or trade in electricity in Queensland;
- access to scarce resources (including know-how and intellectual property);
- information advantages. For example, where the market structure is such that an incumbent entity immediately becomes aware of any existing customer changing supplier thereby enabling the entity to target that customer;
- the nature of relationships in the market. For example, the existence of long term contracts in an industry can represent a major barrier to entry for a potential entrant due to these contracts effectively rendering a proportion of the market non-contestable;
- brand loyalty and customer inertia. While a degree of buyer loyalty exists for any product, in certain instances the need to gain market acceptance of a new entity can significantly delay successful entry and therefore constitute a barrier to entry. Inertia can arise for many reasons, including fear and uncertainty of change, lock-ins (where the customer will remain dependent on the incumbent for some of its services), lack of information regarding choices and high changeover costs; and
- insufficient demand. That is, where the minimum efficient scale of an enterprise in the industry is large relative to current demand, the number of efficient firms in a market will be small. In such instances, the presence of an incumbent may preclude entry by prospective efficient entrants because the market simply may not be big enough to support them. This is likely to be the case where there are economies of scale or scope associated with production technology.

**APPENDIX B - POSSIBLE EXCLUDED DISTRIBUTION SERVICES<sup>9</sup>**

Services and activities that the *Jurisdictional Regulator* may define as *excluded distribution services* may include but are not limited to the following:

- (a) the transportation of electricity not consumed in the *Distribution Network Service Provider's* system (ie. on behalf of another *Distribution Network Service Provider*);
- (b) new connection and augmentation of existing connection to the *distribution network*;
- (c) services (including metering, electric lines or electrical *plant*) for the specific benefit of any *network user* requested by that *network user* and not made available by the *distribution network service provider* as a normal part of *prescribed distribution service* to all customers. These services can include:
  - (1) charges for moving mains, services or *meters* forming part of the *distribution network* to accommodate extension, redesign or redevelopment of any premises;
  - (2) the provision of electric *plant* (ie. mobile generators) for the specific purpose of enabling the provision of top-up or stand-by supplies of electricity; and
  - (3) the provision of prepayment *meters* to customers, but only to the extent that the charge for the provision of those *meters* exceed charges for the provision of standard *meters* for such customers;
- (d) the relocation of electric lines and *plant* and the carrying out of associated works pursuant to any statutory obligations imposed on the *Distribution Network Service Provider*;
- (e) charges for temporary supplies;
- (f) capital contributions or other forms of *prudential requirements* for new works and augmentations;
- (g) charges for *reserve* and duplicate *supply*;
- (h) charges for supplies with higher quality and reliability standards than required by general practice;
- (i) charges for *connection points* requiring more than the least overall cost, technically acceptable assets;
- (j) charges for *distribution services* and system augmentation required to receive energy from an *Embedded Generator*;
- (k) charges for *generator access* for *Embedded Generators* under clause 5.5;
- (l) charges for non-compliance with the connection agreement, including but not limited to *reactive power*, *power factor*, harmonics, *voltage* dips and test supply requirements;

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<sup>9</sup> This Appendix is reproduced from Chapter 6, Section 5 of Schedule 6.6 of the National Electricity Code. Terms in italics have a defined meaning in the Code.

- (m) charges for multiple *connection points* to a single property not recovered through *prescribed distribution service* prices;
- (n) charges for public lighting; and
- (o) charges for provision of *metering* to a standard in excess of that required for the billing of *prescribed distribution network services*.