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Rental Arrangements for Communication Towers on Crown Land
Independent Pricing and Regulatory Tribunal
PO Box K35
Haymarket Post Shop NSW 1240

Dear Sir/Madam

ARCIA'S SUBMISSION TO THE RENTAL ARRANGEMENTS FOR COMMUNICATION TOWERS ON CROWN LAND

Reference is made to the Independent Pricing and Regulatory Tribunal's ('IPART') Review of Rental Arrangements for Communications Towers on Crown Land February 2019 for which submissions are due on or before 12 April 2019.

The Australian Radio Communications Industry Association ('ARCIA') is the peak national industry body representing the two-way and associated wireless radio communications industry in Australia. ARCIA is a not-for-profit, incorporated Association that seeks to promote issues such as the protection and better utilisation of the radio communications sections of the spectrum. ARCIA has nearly 200 corporate and individual members nationally. ARCIA's members employ around 1,200 staff directly in Australia and the services provided by our members are critical to number of industries including but not limited to transport, communications, agriculture and extractive industries, transport and logistics, emergency services and construction.

ARICA welcomes the opportunity to make a submission to the IPART Review. ARCIA is strongly opposed to a number of the proposals in the Review document and believes that:

- they are contrary to the legal precedent set in the decision of Federal Court in *Telstra Corporation Ltd v State of Queensland;*
- they are unsupported in economic terms, and run contrary to economic welfare maximising principles;
- imply the misuse of monopoly power on the part of Crown land agencies;
- the imposts fall most heavily on SME radio service providers relative to their revenues;
- result is unnecessary tower duplication rather than encouraging infrastructure sharing;
- result in inefficient spectrum use; and
- negatively impact the competitiveness and efficiency of the NSW economy, particularly in rural and regional areas.

The IPART proposals, if implemented, we believe will have a negative impact on several industries in NSW as well as on ARCIA's members. They will have adverse flow-on impacts, through higher costs and reduced efficiency, on inter alia the construction, transport and logistics sectors and may also have occupational health and safety implications. ARCIA also considers that that proposals for inequitable charging far in excess of any user pays principle are inconsistent with Australian and NSW law and legal

precedents. The existing arrangements have already had a serious impact on the industry and ARCIA's members, and the present review will potentially exacerbate the situation as the present rental system is unfair.

Further, ARCIA would highlight that the charging precedents in the IPART review, would not only continue to reduce current incentives for infrastructure sharing, but further will likely, if they applied to future 5G deployments (using say 3.5 GHz and future mmWave spectrum) on poles and towers on Crown land, undermine both sector competition and the Commonwealth Government's broader policy objectives. Excessive charging for use of NSW Crown Land is likely to result in inefficient spectrum usage in scarce land mobile radio spectrum as ARCIA members are forced to relocate to sub-optimal transmission locations on private land to avoid unsustainable Crown land charges. Competition policy issues also arise in such circumstances.

While the summary of ARCIA's responses to the questions posed in the IPART Review are detailed in **Appendix A**, ARCIA has also engaged the telecommunications advisory firm of Windsor Place Consulting Pty Ltd to provide it with an independent economic assessment of IPART's proposals (see **Appendix B**). ARCIA would also appreciate an opportunity to present its submission and engage with IPART in person given the significant ramifications of the IPART proposals.

Should you have any queries in relation to our submission please contact the undersigned.

Yours sincerely

[redacted]

Ian Miller
Executive Officer
11 April 2019

Cc:

Mr Mike Mrdak AO
Secretary
Department of Communications and the Arts
GPO Box 2154
Canberra ACT 2601

Ms Nerida O'Loughlin
Chair
Australian Communications Media Authority (ACMA)
PO Box Q500, Queen Victoria Building NSW 1230

Mr Michael Cosgrove
Executive General Manager
Australian Competition and Consumer Commission (ACCC)
GPO Box 3131
Canberra ACT 2601

APPENDIX A

SUMMARY OF ARCIA'S RESPONSES TO IPART REVIEW PAPER QUESTIONS

IPART REVIEW QUESTIONS	ARCIA RESPONSE
1. Do you agree with IPART's proposed approach for this review? Are there any alternative approaches that would better meet the terms of reference, or any other issues we should consider?	ARCIA strongly disagree with the proposed approach. We believe the objective of pricing should be to maximise social welfare not to maximise revenue earned by NSW Crown land agencies (please refer to detail arguments in **Appendix B**). It is particularly important that NSW Government agencies give careful regard to this pricing principle because they often have a large degree of monopoly power in relation to the markets (ie geographical locations) they operate in.
ESTIMATE THE RANGE FOR EFFICIENT RENTS	
2. Do you agree with our proposed definition of efficient rents for communication tower sites on Crown land as the range bounded by a user's willingness to pay and the opportunity cost to the land agency?	ARCIA strongly disagree with the proposed approach. The relevant economic theory clearly indicates that efficient pricing from the perspective of maximising social welfare requires that price should be at opportunity cost. Price equal to opportunity cost is what occurs at a competitive equilibrium (please refer to detail arguments in **Appendix B**). According to well accepted economic theory, pricing above opportunity cost leads to a loss of social welfare, transfer of economic benefits (surplus) from consumers to producers and under-production and under-consumption of the product or service in question. The relevant economic theory also indicates that charging above opportunity cost involves the use of market power and involve the extraction of monopoly rents from consumers. The proposed IPART pricing principles effectively represent a usurious tax on tower operators and co-users that is extracted via monopoly pricing.
3. What information should we consider to estimate users' willingness to pay (for example market-based commercial rents paid to private land owners)?	ARCIA believe that willingness to pay is not directly relevant to IPART's pricing model on the basis that pricing should be directed to maximising social welfare and focus on opportunity cost not willingness to pay.
4. Do market-based rents typically cover all services related to access, use and operation of the land or are there any additional fees charged to users (such as fees for maintenance of access roads)?	The appropriate response here is that market-based rents will vary on a case-by-case basis and the particulars of any specific commercial transaction will be incorporated by the parties in their negotiations for rental agreements. ARCIA is of the view that attempts to analyse and generalise regarding such factors is highly prone to the development of blanket solutions that lead to inefficient practices and pricing.
5. What characteristics of a communication tower site are users more willing to pay for? Are these different for users that provide services in different markets?	There are number of ways in which the desirable characteristics of sites could be described but, in general, tower operators will want to maximise revenue per unit of capital and operational cost in order to maximise profits. Revenue will be driven by a number of factors but primarily by coverage for relevant target markets. Therefore, operators will be willing to pay more for sites with these key locational attributes. An important qualifying factor is the extent to which substitutes sites of relatively similar quality are available. Sites that have

IPART REVIEW QUESTIONS	ARCIA RESPONSE
	few or no close substitutes will be able to attract higher rentals to the extent that landowners are willing to exercise monopoly power to attract rentals that more than cover opportunity costs.
6. How should we estimate the land agency's opportunity cost? Does this vary for sites in different locations?	Definitionally, opportunity cost is equal to what could be earned by putting the resource in question to the next best possible use. To estimate opportunity cost most appropriate method would be to identify prices or rents paid for communication towers on private land (see examples in **Appendix B**), in particular, in cases where there are multiple options for tower siting that ensure that prices are competitively determined. See the table below for examples of private land rental rates paid by radio network providers (RNP). Such data, provided by ARCIA stakeholders shows: • a wider of annual rental charges private land use; • a variety of commercial terms in rental agreements; • that the range of geographic locations encompassed by these examples exerts a significant influence on terms; and • that proposed Crown land rents are large compared with these annual rental amounts, and in some cases, significantly higher.

TABLE OF INDICATIVE DATA ON PRIVATE LAND RENTALS

Scenario	Structure	Term	Site Cost	Electricity Costs	Rent Review
Scenario 1	30m free standing tower and Hut owned by the RNP	25 years	$10,000 per annum	Paid by RNP	3 percent per annum
Scenario 2	30m lattice guide tower owned by our company and occupancy in a supplied hut	10 years	$4,000	Paid by RNP	3 percent per annum
Scenario 3	30m free standing tower and Hut owned by the RNP	5 years	$6,000 per annum	Paid by RNP	3 percent per annum
Scenario 4	30m free standing tower and Hut owned by the RNP	10 years	$4,000 per annum	Paid by landowners	3 percent per annum
Scenario 5	30m free standing tower and Hut owned by the RNP	10 years	$20,000 per annum fixed plus value per licence	Paid by landowners	3 percent per annum
Scenario 6	10m, pole and Hut owned by the RNP	3 years	$10,000 per annum	Paid by RNP	3 percent per annum
Scenario 7	10m, pole and Hut owned by the RNP	3 years	$6,000 per annum	Paid by RNP	3 percent per annum

	IPART REVIEW QUESTIONS	ARCIA RESPONSE
7.	**What do you consider to be a 'fair' sharing of any differences between a user's willingness to pay and the opportunity cost of a site?**	The question of fairness is irrelevant. The relevant criterion is what pricing level promotes the maximum social welfare and efficient resource allocation. To achieve this outcome prices should be set at opportunity cost. It is important to emphasise that with price set at opportunity cost the landowner still earns a share of surplus from the transaction. Opportunity cost is defined to include payments (at a 'normal' rate) to all factors of production for the provision of any particular resource. Attempts by landowners to earn higher than the 'normal rate of return' definitionally means an effort to extract monopoly rents from the transaction which, as noted already, decreases efficiency of resource allocation and social welfare. In practice, a guide to opportunity cost pricing could be found in rental agreements for similar private land in competitive environments. That is, rental agreements where tower operators have a range of relatively close substitutes for siting towers.
DECIDE ON AND APPLY A RENT SETTING METHODOLOGY		
8.	**Does the current market evidence support continuing the existing schedule of rental fees by location? Would there be benefits to increasing or decreasing the number of location categories?**	The categorisation of locations into the various categories suggested by IPART is, in effect, an attempt to estimate land values and therefore rental pricing in a range of environments from Sydney urban areas to rural and regional NSW. We propose that a superior method is to use the value of rentals from private land agreements where there is significant flexibility in tower siting options in the area under consideration, that is, where private land rental agreements are struck in a competitive rather than a monopolistic environment. As detailed in Appendix B, there are strong arguments that *A Review of the Current Schedule of Rentals for Telecommunication Sites Located in NSW, 25 March 2013* undertaken previously by BEM Consultants is outdated and a new complete valuation exercise needs to be undertaken again by IPART. This is due to market changes and most importantly to comply with the Federal Court precedent in *Telstra Corporation Ltd v State of Queensland*.
9.	**Are the current location categories reflective of recent data on population density?**	As stated above, and a new complete valuation exercise needs to be undertaken again by IPART which would have significantly more granularity than the current categories. Population density would be one factor which needs to be taken into account in the construction of such categories.
10.	**What is the appropriate rent discount for co-users?**	ARCIA believe that the pricing practices proposed in the IPART review are flawed in that they are in no way "fair and market-based". In a market-based negotiation between tower operator and landowner, the tower operator will give regard to the current and future potential revenue earning opportunities of their proposed infrastructure expenditure and incorporate this into their rental agreement negotiation strategy. Such market-based arrangements, struck in a competitive environment, should form the basis of Crown land agencies' pricing for tower site rentals. This is the only meaningful sense in which such arrangements could be said to be "market-based". We note also that lessees or potential lessees may wish to lodge a complaint on lease pricing with the NSW Civil and Administrative Tribunal (NCAT) and have strong grounds for doing so.

11.	**Should infrastructure providers receive a discount relative to primary users?**	On the basis of the logic above, infrastructure providers should receive no discount. Rentals are based on market driven rental agreements can be expected to incorporate the revenue expectations of infrastructure providers and, in practice, it is highly unlikely that any infrastructure provider would develop a site without a firm agreement from at least one, but potentially, a number of tower users.
12.	**Does the current rebate system adequately address the benefits that community groups and government authorities provide to the public?**	This question is best left to community groups to answer. From the ARCIA perspective, lowering the cost for community groups makes sense from a societal perspective.
13.	**Should the current rent arrangements based on site-by-site negotiation for high-value sites be continued?**	ARCIA believe that all rent arrangements should be based on a site by site negotiation but that Crown land agencies should aim for a price equal to opportunity cost not a price that reflects the monopoly power associated with scarce sites for which there are no close substitutes. There is no doubt that opportunity cost in for example, Sydney Metropolitan areas will be higher than opportunity cost in remote regions. But the opportunity cost of a for example, unique hilltop in remote NSW would be relatively low whereas the potential rent that could be extracted by monopoly pricing would be relatively high.
14.	**Would a valuation formula based on observable site characteristics be a viable alternative for setting rents for high-value sites? If so, what site characteristics would need to be included in the formula to determine the rent?**	ARCIA believe that a valuation formula will tend to be an excessive degree a 'blanket solution' that is vulnerable to bureaucratic manipulation to maximise revenue earn rather than reflect true opportunity cost. As emphasised above, basing target rental rates on private land agreements struck and competitive environments should be the guide to setting rental rate targets for Crown land agencies.
TRANSITIONING IMPACTS ON USERS AND ADJUSTING RENTS OVER TIME		
15.	**Do you agree with our proposed approach for assessing the impact of our recommendations on users?**	Only after a new complete valuation exercise is undertaken by IPART to address market changes and most importantly to comply with the Federal Court precedent in *Telstra Corporation Ltd v State of Queensland* can the transition arrangements be assessed.
16.	**Is the current approach of adjusting rents annually by the CPI appropriate?**	CPI is not particularly relevant. ARCIA considers that pricing should be based on rental prices achieved for comparable private land in competitive environments.
17.	**Should the fee schedule continue to be independently reviewed every five years?**	Yes, absolutely. This is the only way to ensure competitive market-based charges.

INDEPENDENT CONSULTANT REPORT ON ASPECTS OF THE IPART REVIEW

[separate file]

Independent assessment of IPART Review of rental arrangements for communication towers on Crown land

for

The Australian Radio Communications Industry Association

FINAL 11 April 2019

Contents

1 EXECUTIVE SUMMARY

The Australian Radio Communications Industry Association (ARCIA) commissioned Windsor Place Consulting (WPC) to develop an independent assessment of the IPART *Review of rental arrangements for communication towers on Crown land*.

WPC has examined this document and the advice IPART consultant, BEM Property, as well as other associated documents.

Firstly, our view is that IPART's proposed pricing principles need to be reconsidered from the ground up. Given the Federal Court precedent in *Telstra Corporation Ltd v State of Queensland,* there are strong arguments that A Review of the Current Schedule of Rentals for Telecommunication Sites Located in NSW, 25 March 2013 *undertaken previously by BEM Consultants is outdated and a new complete valuation exercise needs to be undertaken again by IPART.*

Given the IPART pricing proposals for Crown Land in NSW are also based on four location categories of Sydney, High, Medium and Low and we would contend, that such broad categories of lease rates are lacking the granularity to reflect private market rents in the site locations. As a minimum it would seem necessary to use more sub-market areas and to take into account more variables in order to develop revised market-based prices.

Secondly, WPC strongly believe the economic arguments in support of the proposed pricing principles are flawed in several respects. The pricing principles appear to promote the role of Crown land management agencies as rental revenue maximisers whereas the appropriate role for government agencies is to maximise social welfare for the State's residents. IPART proposes to charge rental levels somewhere between opportunity cost and willingness to pay whereas economic theory clearly indicates that the welfare maximising pricing principle is to price at opportunity cost.

It is fundamentally wrong to imply that setting price at opportunity cost means that the renter receives no share of the value. Opportunity cost, by definition, includes a 'normal' rate of return to all factors production required to produce a particular resource.

IPART's defense of attempting to secure larger surpluses than would be implied by opportunity cost pricing is based on their argument that land that is attractive for communications tower sites should be able to attract 'Ricardian' rents. We believe this defence is flawed because it is predicated on an incorrect specification of the market for land for communication towers.

WPC believe the appropriate way to describe market for land for communication towers is as a series of monopolistic or quasi-monopolistic geographically separated markets within which there is only one or only a few appropriate sites for communication towers. If Crown land covers all, or the majority, of such an area then it is properly regarded as a natural monopolist for that particular geographic market. A natural monopolist, by definition, supplies the entirety of the market. Ricardian rents by contrast, can only be captured by a low-cost provider that exists in a market where it cannot supply the whole market demand. Therefore, IPART's proposed pricing principles cannot be regarded as seeking Ricardian rents but rather must be interpreted as constituting some element of monopolistic pricing.

Thirdly, based on earlier work in the radio communications industry, WPC estimates the economic benefits of land mobile radio services the New South Wales economy at between $636 million and $1.19 billion per annum. Radio services contribute directly to the operational efficiency and competitiveness of major sectors in the state and national economy including transport, logistics, emergency services and, of course, communications.

Radio communications are particularly critical to the welfare of New South Wales' rural and regional citizens who often experience mobile phone blackspots and rely on robust and reliable radio networks that are well understood by long-term rural users. In particular, rural and regional businesses, farmers and the mining industry are significant users of radio communications.

Fourthly, WPC find that the prices charged by Crown land agencies are significantly higher than those charged for communication tower rentals by private landowners. The impacts of these higher prices are significant and uniformly deleterious. They include:

- decreased availability of radio services particularly in rural and regional Australia and/or higher prices for such services;
- decreased incentives for communication tower infrastructure sharing among service providers as they attempt to exit facilities on Crown land and build new infrastructure on private land to avoid prohibitive costs;
- associated with this previous point, a loss in environmental amenity associated with the construction of additional towers;
- utilisation of suboptimal communication tower sites leading to decreased service quality and reduced efficiency of spectrum use; and

- users will be forced on to public carrier networks which have more patchy coverage and are inherently one-to-one rather than one-to-many which is a critically important fundamental characteristic of radio networks.

We note also that lessees or potential lessees may wish to lodge a complaint on lease pricing with the NSW Civil and Administrative Tribunal (NCAT) and have strong grounds for doing so.

Lastly, WPC considers that IPART's recommendations, if followed, could attract the attention of the Australian Consumer and Competition Commission (ACCC) given the competition policy and legal issues involved and the Australian Communications and Media Authority (ACMA) due to the operation of the proposed pricing principles undermining the efficient use of scarce spectrum and setting of unfavourable precedents for 5G deployment in Australia.

2 INTRODUCTION AND BACKGROUND

2.1 THIS REPORT

The Australian Radio Communications Industry Association (ARCIA) commissioned Windsor Place Consulting (WPC) to develop an independent assessment of the IPART *Review of rental arrangements for communication towers on Crown land*. Specifically, WPC has been asked to:

- Assess and prepare a paper on the IPART Review and associated documentation;
- Utilising the 2014 WPC paper for ARCIA titled *Valuing mission critical radio services: A study of the economic value of land mobile radio spectrum in Australia,* consider the economic and social impact in New South Wales as arising from the possible implementation of the IPART proposals on the Land Mobile Radio (LMR) industry;
- Review the economics literature on the relevant economic issues in the IPART Review including efficient prices, opportunity costs, willingness to pay etc;
- Consider the legal issues associated with the Federal Court decision in *Telstra Corporation Ltd v State of Queensland*; and
- Report and highlight exemplar practice in this area.

2.2 ABOUT THE AUSTRALIAN RADIO COMMUNICATIONS INDUSTRY ASSOCIATION (ARCIA)

ARCIA is the peak national industry body representing the two-way and associated wireless radio communications industry in Australia. ARCIA represents a diverse set of users, as well as equipment manufacturers, distributors, importers/exporters, wholesalers and retailers. ARCIA is a not-for-profit, incorporated Association that seeks to promote issues such as the protection and better utilisation of the radio communications sections of the spectrum. Further information can be found at www.arcia.org.au

2.3 ABOUT WINDSOR PLACE CONSULTING

Windsor Place Consulting ('WPC') is internationally recognised as an outstanding provider of advice to the information industries. The firm works extensively in telecommunications, media, and information technology, both in the development of commercial strategies for the private sector and the formulation of national policy and legislative settings for public sector clients. Our team

members have a long association with these industries, having been actively involved through various stages of market liberalisation, from the introduction of competition in Australia in the 1990's to the drafting and implementation of modern convergence legislation in a range of countries especially in Asia, Africa and the Pacific.

Projects undertaken by WPC of relevance to the preparation of this White Paper include:

- Adviser to **edotco Group** on a range of Asian markets including Malaysia and edotco's entry into the Philippines, Bangladesh and Cambodia markets. Established in 2012 and headquartered in Malaysia, the edotco Group is Asia's leading multi-country tower operator, with approximately 41,000+ towers either owned or managed by it across 6 countries, making it the 12th largest tower operator in the world and the 7th in Asia (ongoing);
- Author of the **GSMA** Report: *Securing the digital dividend across the entire ASEAN: A report on the status of the implementation of the APT700 band for ATRC*, August 2018. Available at www.gsma.com/spectrum/securing-the-digital-dividend-across-the-entire-asean/;
- Author of the **ITU** White Paper sponsored by Huawei, on ***Broadband Regulation and Policy in Asia-Pacific Region: Facilitating Faster Broadband Deployment***, October 2016. Presented at ITU Telecom World in Bangkok. Available at www.itu.int/en/ITU-D/Regional-Presence/AsiaPacific/Pages/Events/2016/APAC-BB- 2016/home.aspx;
- Preparation for the **Commonwealth Telecommunications Organisation** (CTO), a major research paper focused on investment attraction entitled "*Over-The-Top Services: Understanding the Challenges & Opportunities"*, July 2018;
- Author of **WPC Report** entitled Powered Evolution to 5G: The compelling case to adopt LTE Band 41 in the 2.6 GHz spectrum band in Asia and globally (October 2018). Available at www.gsacom.com;
- Author of the **ITU** paper *"Regulatory Challenges and Opportunities in the new ICT Ecosystem"* looking at ***OTT regulation*** and other issues (2017). Available at www.itu.int/en/ITU-D/Regulatory-Market/Pages/Collaborative_Regulation/App_Economy.aspx
- Authorship of the ***ITU discussion paper*** *"The Race for Scale: Market Power, Regulation and the App Economy*" which was presented at Global Symposium of Regulators (GSR-16) in Sharm el Sheikh, Egypt in May 2016. Available at www.itu.int/en/ITU-D/Conferences/GSR/Pages/GSR2016/Papers.aspx;
- Key authorship of the **ITU's Wireless Broadband Masterplan Project** (2011/12). This included preparation of Wireless Broadband Masterplans for selected Asian and Pacific countries sponsored by the South Korean

Government, including **Myanmar, Nepal, Viet Nam and Samoa** with a generic Wireless Broadband Masterplan for Asia Pacific;

- Developed a cost benefit model for the **Malaysian Government and Telekom Malaysia** on Malaysia's High-Speed Broadband Network and economic model of benefits of telecommunications sector to the national economy (2007), including open access arrangements for the high speed broadband access (HSBA) and high speed broadband transmission wholesale services; and
- Authorship of the Study for the **Australian Music Association**, entitled "Untethering the Microphone: Economic Study of the benefits of spectrum use for unlicensed wireless audiovisual devices in Australia. An updated analysis, 4 March 2010."

3 VALUE OF THE RADIO COMMUNICATIONS SECTOR TO THE NSW ECONOMY

In 2014, WPC authored a report for ARCIA titled *Valuing mission critical radio services: A study of the economic value of land mobile radio spectrum in Australia.* The estimates of economic benefits calculated in this report were based on an extensive end user survey in Australia and the results of similar studies overseas.

Two separate valuation methodologies were used in this study: one based on an asset value approach – related to the investment in equipment used by organisations and individuals using land mobile radio (LMR) communications systems and one based on the valuation of the time devoted to the use of radio communications. These two methods yielded values of $1.99 billion per annum and $3.72 billion per annum respectively. This approach is conservative in that does not reflect the value to the end user beyond these costs in delivering the services. These benefits were compared with the estimated opportunity cost of spectrum allocated to LMR of $39.7 million per annum. The report concluded:

> *Although rapid technology-driven changes appear set to rapidly transform services through the introduction of digital radio and mobile cellular broadband communications, the organisations that use LMR, particularly emergency service and first responder services, are deeply dependent on mission critical radio to delivery on their various missions. Radio is fundamentally embedded into their operations and procedures and radio delivers a level and type of connectivity and resilience that is not available from alternative technologies.*
>
> *In this context, assertions about the substitutability of alternatives to radio need to be carefully considered and the community's rising expectations of emergency services also need to be factored into such evaluations.*

New South Wales, with 8,023,700 people makes up almost 32% of Australia's population. Therefore, on a simple population pro rata basis the economic benefits of LMR are between $636 million and $1.19 billion. Given the relatively large New South Wales population in rural and regional areas compared to some other states, these figures likely underestimate the benefits to New South Wales.

A computation of NSW's share of national Gross Domestic Product (at $593 billion for 2017-18 or 32.6 per cent of national GDP [1]) produces a similar result.

The LMR services that support regional and rural New South Wales are provided by relatively small business operations which are, generally speaking, not highly profitable. Rental payments for communication tower sites form a significant proportion of their business costs and a significant increase in site rental charges risk making many of these businesses non-viable or, at least, may be provision of services in more marginal areas and economic.

As part of its previous study, WPC conducted an Australia-wide online survey attracted over 400 responses from radio industry participants as well as conducting numerous face-to-face and telephone interviews. Exhibit 1 provides information about the industry sectors of respondents to the survey.

Exhibit 1: Which industry/market segment do you work in?

Industry or Segment	No. of Respondents	Ave no. of respondents per entity	Estimate of no. of entities	Proportion
Comm services and equip	164	1.1	149	41.3%
Other	47	1.0	46	12.6%
Emergency services	60	1.8	34	9.5%
Mining	27	1.0	27	7.5%
Transport	31	1.3	24	6.7%
Utilities provider	25	1.2	21	6.0%
Manufacturing	21	1.0	21	5.8%
Not identified	16	1.0	16	4.4%
Other government user	17	1.1	15	4.3%
Construction	7	1.0	7	1.9%
Total	**415**	**1.2**	**360**	**100.0%**

Exhibit 2 shows large number of employees and volunteers who are involved in sectors that are heavy users of radio communications and shows that a large proportion of these persons are involved in activities that are highly communications dependent and further that these activities are dependent on LMR services. Again, for emphasis, these are national figures and as a general

1 Australian bureau of statistics, 5220.0 - Australian National Accounts: State Accounts, 2017-18

rule-of-thumb, figures for New South Wales will be around one third of these national titles in most cases.

Exhibit 2: Which of the following best describes the context in which you use radio communications devices: averages?

				Averages from survey				
	No of Respondents	Ave no. of respondents per entity	Estimate of no. of entities	Employees	Employees plus volunteers	Propn of employees who use LMR	Propn in Highly comms dependant activities	Propn of in Normal activities
Emergency services user	82	1.8	47	5157	16351	67%	68%	42%
Large enterprise user	76	1.0	76	978	980	62%	47%	43%
Other	85	1.0	85	410	424	46%	46%	36%
Other government user	32	1.0	32	1080	1121	46%	48%	51%
Private recreational user	33	1.0	33					
Single prop/small business user (< 20 emp)	64	1.0	62	23	23	63%	56%	42%
Utilities provider	28	1.2	24	1540	1540	39%	49%	54%
Not identified	15	1.0	15					
Totals and Averages	**415**	**1.1**	**373**	**1513**	**3665**	**56%**	**54%**	**43%**

It is important to note that these organisations regard LMR services as highly important to their operations.

Exhibit 3: How would you describe the 'criticality' of LMR services for the ability of your organisation to deliver its services overall?

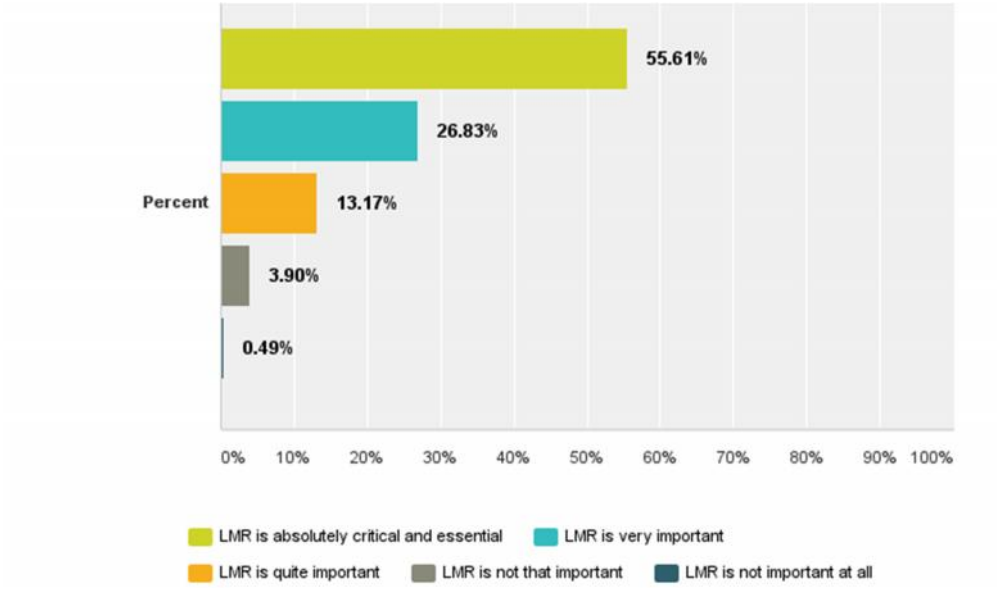


Exhibit 3 shows the distribution of responses to the survey question regarding the criticality of LMR services to the ability of these organisations to deliver its

services. Over 55% of respondents regard LMR as 'absolutely critical and essential' for the delivery of services with only 4.39% regarding LMR as 'not that important' or 'not important at all'.

Exhibit 4 shows responses to the survey question regarding the responses of organisations to 3 hypothetical increases in the cost of LMR services. It can clearly be seen that, although the substantial majority of organisations regard LMR as critical to their operations they are nonetheless responses even the hypothetical price increases. This is, at least in part, because many of these organisations are not highly profitable or not particularly well funded and would need to respond to a price increase by curtailing expenditure on LMR services.

Exhibit 4: How do you think your organisation would respond in terms of its future use of LMR in relation to the provision of 'highly comms dependent activities' in the face of the following hypothetical cost increased for LMR services?

		Increase in LMR cost		
		30%	**Double**	**5 times**
Change to service provision level	No change	64%	35%	23%
	Slightly reduce	23%	30%	20%
	Significantly reduce	10%	26%	28%
	Stop using	3%	9%	29%

Overall, this discussion demonstrates the importance of radiocommunication services across multiple industries. These services are regarded by organisations in the sectors to be critical to operations and price increases would have a retrograde effect on these organisations ability to deliver services to their end users.

In Section 7 provide some discussion of the impacts of current pricing practices on the market for radiocommunication services New South Wales.

4 THE ECONOMICS OF PRICING ACCESS TO CROWN LAND FOR COMMUNICATION TOWERS

4.1 THE DISTINCTION BETWEEN COMMERCIAL OBJECTIVES AND GOVERNMENT OBJECTIVES

There are clear distinctions between the role of commercial enterprises and the role of governments both in economic theory and pragmatically speaking.

In economic theory and, to a large extent, in the real world, businesses attempt to maximise profits in order to maximise returns to their shareholders. If markets are competitive, the efforts of private enterprises to maximise profits results in socially desirable outcomes including lower prices for consumers, a fair (or, more technically, 'a normal') rate of return for investors and an efficient use of productive resources. There are similar resource allocation drivers for community and not for profit organisations.

If markets are not structurally uncompetitive it is likely that businesses will attempt to exploit their market power resulting in less desirable economic outcomes, in particular, higher prices for consumers higher rates of return (monopoly profits) to business owners and a less than efficient output of the relevant products and services.

As presented in many publications in the discipline of public finance and economics[2] – Governments, in contrast, should seek to maximise economic benefits for their citizens or society as a whole. Economists call this aggregate benefit 'social welfare', a utilitarian concept of 'the greatest good for the greatest number'. This objective is set within two parameters of efficiency and equity. It is particularly important that governments keep this objective in focus because, within many of the areas in which it operates, it is effectively a monopolist and, were it to behave as a monopolist behaves in the private sector, the outcomes in terms of loss of benefits to 'consumers' (or 'citizens') would be similar to that which occurs when a business abuses its market power to the detriment of its consumers. While broadly understood, this principle has often been lost in the

2 Economics of the Public Sector, 2015, Stiglitz, Joseph E; Rosengard, Jay K.

unforeseen consequences of the shift to corporatisation in government entities with associated emphasis on revenue raising rather than the public interest. As noted Watkins (Watkins) economic theory supports a fundamental principle that "The operation of a competitive market yields an efficient allocation of available economic resources. Government intervention in such a market process does not produce, on balance, an improvement in the economy but instead, on balance, makes the economy worse off."

From this perspective we question the suitability of the objective of seeking a fee schedule fee schedule that reflects "fair, market-based commercial returns". With reference to IPART's review Question 1:

> *Do you agree with IPART's proposed approach for this review? Are there any alternative approaches that would better meet the terms of reference, or any other issues we should consider?*

Our response is that, as government agencies, the relevant Crown land administrators should operate to maximise social welfare rather than maximising revenue from Crown land sites used for communication towers. Below, we provide more detail on the distinction between maximising social welfare and maximising revenue. In addition, we provide a set of more specific recommendations emerging from consideration of the relevant economic theory.

This is set in the context that all products in consumption have some combination of private benefit, and some level of public or externality benefit (or sometimes cost) which have a combined impact on the level of provisioning and the pricing decision. Some are close to a private good, but where public goods are extensive the framework needs adaptation to reflect vertical aggregation of benefits.

4.2 THE NATURE OF THE MARKET FOR COMMUNICATION TOWERS ON CROWN LAND

Before deciding what is the optimal pricing practice from a government perspective, it is necessary to consider the nature of the market for communication towers on Crown land. Clearly, this market does not have the structural characteristics of a competitive market for there is nothing like 'many sellers and many buyers'.

In addition, we cannot consider that there is a single market for Crown land sites and communication towers that encompasses all sites and all potential 'buyers' of sites. In fact, at each geographic location where it is suitable to establish a communication tower on Crown land, it is highly likely that a particular site, or an alternative quite proximate to it, has no close substitute whatsoever. A communications company and/or an infrastructure provider, in order to extend

and make as contiguous as possible its network and take advantage of local geographic and topographical characteristics, will face a highly restricted set of options regarding the siting of its tower.

Therefore, market is best described as a set of geographically separated monopolies. At each site, there is a single seller, the agency that controls the site, and likely several potential buyers in the form of telecommunications operators and/or infrastructure providers. An important qualification to this statement is that there is likely to be a sliding scale of monopoly power in respect of each actual or potential tower site. Some sites on Crown land there will be no proximate alternative and, in such cases, the Crown land site represents a pure monopoly. In other cases there may be alternatives that, while being technically inferior from a coverage perspective, are viable sites. In such cases the degree of monopoly power associated with Crown land sites will be moderated by the extent of substitutability between Crown land and the private site. This will largely be determined by considerations such as altitude, coverage potential, line of sight access et cetera.

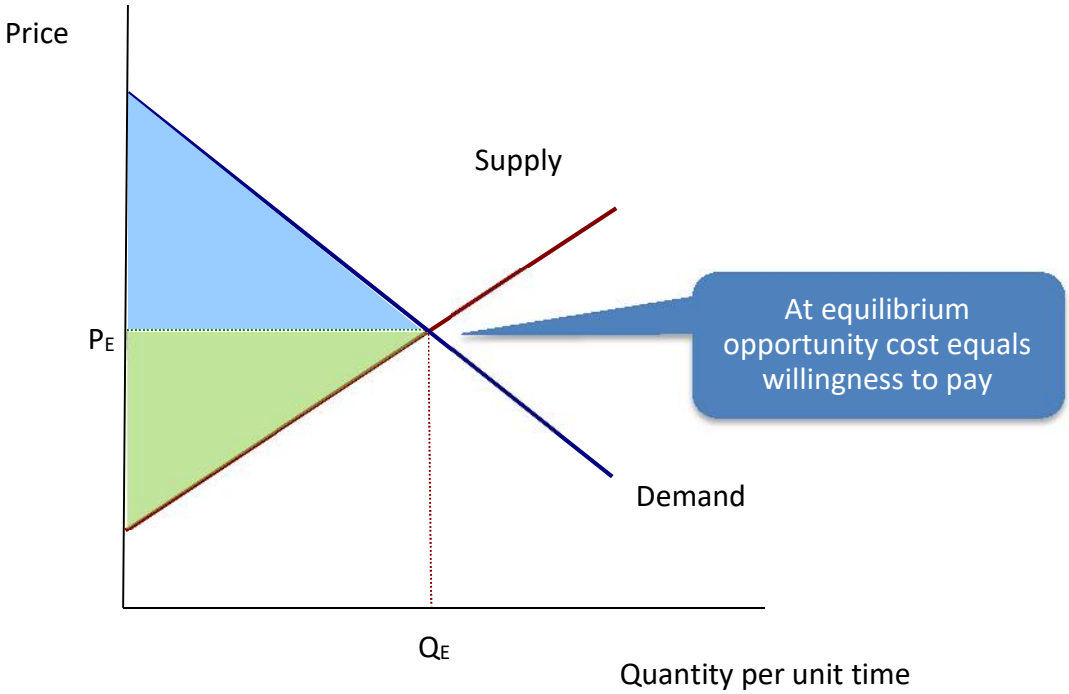
4.3 OPPORTUNITY COST, WILLINGNESS TO PAY AND WELFARE MAXIMISING PRICING

Before considering the conceptual aspects of pricing practice for communication towers on Crown land, we consider first the nature of the relationship between opportunity cost, willingness to pay and price in competitive markets with a view to defining and clarifying the characteristics of social welfare maximising pricing. As mentioned above, competitive markets produce economically desirable outcomes because they are social welfare maximising.

Exhibit 5 will be highly familiar to any economist. It shows basic Supply and demand equilibrium in a competitive market. The interaction of many sellers and many buyers produces an equilibrium price and quantity (P_E and Q_E). One of the important aspects about such an equilibrium is the way it generates 'surpluses', or net benefits, for consumers and producers. In perfectly competitive markets, it is not assumed that all consumers and producers are identical. Some consumers, for example, will have a higher valuation of the product in question than others. What this means, in effect, is that those consumers with high valuations would have still bought the product at a higher price than the equilibrium price. This is, in fact, the source of consumer surplus: which is defined as the benefit of consuming a good over and above the price that is paid to secure it. The aggregate consumer surplus for this market is shown by the blue triangle and the analogously defined producer surplus is shown by the green area.

The consumer who is willing to pay just equilibrium market price and no more is described as the marginal consumer. Similarly, the producer who is just willing to supply units to the market at the market price is called the marginal producer. For the marginal consumer and the marginal producer surpluses are zero.

Exhibit 5: Equilibrium, consumer surplus and willingness to pay



Importantly, at the equilibrium price, willingness to pay is equal to the opportunity cost. This is, in fact, another way of stating the efficiency characteristic of a competitive market equilibrium: that the value (willingness to pay) of the last unit sold is equal to the cost of resources used to make it (opportunity cost).

Again, it is noted that where a product has public good characteristics or positive externalities the same principles apply, but the benefits curve involves vertical aggregation (in that consumption of public goods does not exclude other users).

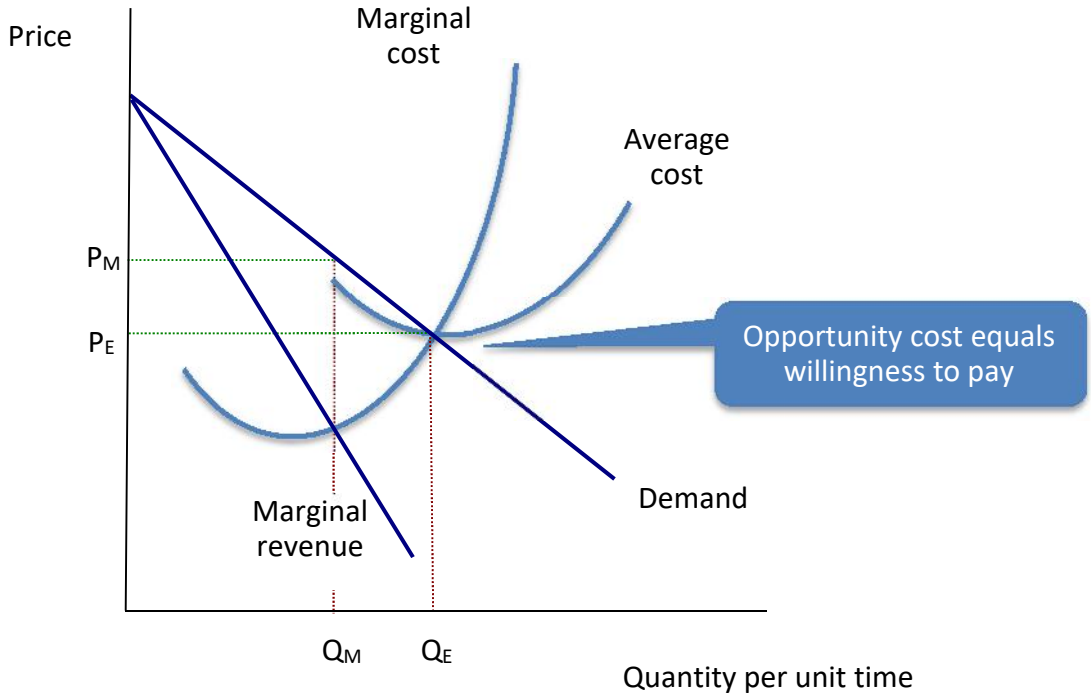
As we have pointed out already, however, the markets we are considering are anything but competitive. In fact, the markets consist of a single seller and a few buyers.

Economists will also be familiar with Exhibit 6, the classic 'monopoly diagram'. In this analysis, the monopolist maximises profits by reducing at Q_M which results in price equal to P_M. This outcome results in welfare loss to consumers, a transfer of

surplus from consumers to the producer and the classic net loss to society described as 'social deadweight loss' that results from the underproduction and under consumption of the good in question.

Welfare maximising outcome in this case is at $Q_M P_M$ where price equals average cost. At this point, again, opportunity cost equals willingness to pay.

Exhibit 6: Equilibrium, consumer surplus and willingness to pay



4.4 MONOPOLY AND RICARDIAN RENTS

IPART argues that "in principle, rents should reflect a fair sharing of the economic surplus between land management agencies and users". *This principle is a value driven statement and there is nothing provided in the documentation as a rationale for why it should apply.* Indeed, we believe that this statement is not useful as a principle because the term "fair sharing" in this term is entirely subjective. As we have indicated above, it is welfare maximising to price at opportunity cost and, at opportunity cost, the seller shares in the surpluses including a normal rate of return to all factors of production. IPART then asserts that land management agencies "should receive a share of":

- The economic value that primary users derive from using the site for transmission purposes,

- The rent that primary users and infrastructure providers recover from co-users (after allowing for their costs of developing and maintaining the infrastructure used by co-users).

IPART notes that, in practice, the difficulties associated with estimating opportunity cost and willingness-to-pay. IPART goes on to say:

> *We note that some sites are more valuable than others because of their varying suitability to networked communication services. The higher rental price obtainable for these sites need not be reduced by regulation. It represents a Ricardian rent, meaning it is a reflection of a more valuable endowment than alternative sites, and it is not inefficient for land owners to earn Ricardian rents. To the extent that the supply of valuable sites is restricted, it is restricted by nature, and not by any action of the owner. In contrast, regulation is normally applied to monopoly rent, which is obtained by an owner who uses the ability to restrict supply to drive up the price.*

We believe that this analysis is flawed because it is based on a mis-definition of the market for land for communication towers. As we noted above, the best market definition is a series of geographically separated markets that are, to varying degrees, monopolistic. Market boundaries are defined by the degree of substitutability between the products of different sellers. If the products of two sellers are highly substitutable, they can be said to be in the same market. It is clearly the case that there is not a contiguous market over all of NSW for communication towers – land for a communication tower in northern NSW is in no way a substitute for land for a communication tower in southern NSW. This is similar to the market for pre-mixed concrete: the geographic size of the market is limited because of the 'perishability' of pre-mixed concreate.

Further, it should be noted that the market is already distorted by regulation – Crown land is Crown land by virtue of legislation and is usually defined as such for reasons such as environmental or heritage protection. Via such legislation the government creates scarcity in areas where land is defined as Crown land. In a situation where the government agency seeks to charge higher than market prices and maximise revenue it is using this legislated scarcity to extract value. This could be construed to create significant conflict of interests in respect of ongoing legislative intervention and revenue raising.

In some situations, where multiple private landowners offer similar alternatives for a particular tower site, the market could be said to be relatively competitive on the selling side. In the case of Crown land, is more likely that the landowner is a monopolist or quasi-monopolist because Crown land holdings tend to be extensive (there are no proximate alternatives) and typically desirable high

elevation sites are on Crown land. And again, the issue in terms of pricing on crown land is that the natural monopoly is bestowed on the government by legislation linked to other objectives.

It is likely that in most situations regarding the siting of communication towers, single tower represent a 'natural monopoly'. This means that it would be inefficient, in the sense that costs would be higher, if more than one tower were to service the needs of the particular local market.

On this market definition, the argument regarding Ricardian rents can be shown to be not applicable. The reference in relation to Ricardian rents cited by IPART[3] states:

> *'Ricardian' or resource rents are those which accrue to a firm due to the nature of physical assets possessed by that firm and their scarcity. Resource rents very often pertain to minerals deposits, held by certain countries as 'gifts from nature'.*
>
> *The cost of extracting minerals varies. For example, the costs to mine Australia's deposits of coal, iron ore and bauxite are among the world's lowest. Because these are not sufficient to supply the global market, consumers of these resources must secure additional supply from higher-cost producers, which become the price-setters. As a result, the owners of lower cost Australian resources are able to earn a resource rent.*

Critically, in this argument, Ricardian rents accrue to suppliers who, have lower costs than average, but have insufficient output to meet the entire market demand. This situation stands in complete contrast to that of a monopolist in a local market. By definition, a natural monopoly, is a seller that completely services the needs of a particular market. Therefore, Ricardian rents cannot exist and cannot be used as a justification for charging prices above welfare maximising opportunity cost.

The corollary of this analysis is that prices charged above opportunity cost represent monopoly behaviour and the charging of monopoly rents. It is agreed that Ricardian rents should not attract regulatory intervention, but the same is not true of monopoly rents.

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[3] Wills-Johnson, N. and Affleck, F., A problem looking for a solution for a solution looking for a problem? Economic regulation of railways in logistics chains, 2006, pp 3-5, at https://atrf.info/papers/2006/2006_WillsJohnson_Affleck.pdf accessed on 21 February 2019.

4.5 IMPLICATIONS OF ECONOMIC THEORY FOR PRICING COMMUNICATION TOWER ACCESS TO CROWN LAND SITES

This brief discussion of the economic theory concerning the welfare implications of competitive and monopolistic pricing has numerous implications for IPART's discussion of pricing principles for tower location.

In particular, in relation to IPART's Question 2:

> *Do you agree with our proposed definition of efficient rents for communication tower sites on Crown land as the range bounded by a user's willingness to pay and the opportunity cost to the land agency?*

We disagree with this proposed definition of efficient rents. We believe that efficient rents should be defined as being as close as possible to the opportunity cost of each site. It is arguable that the various government agencies could attempt to recover some administrational transaction costs associated with the fundamental rental transaction but it is also arguable that these costs should be met from general revenue.

As the IPART review document correctly identifies, charging rent somewhere between opportunity cost and willingness to pay will mean that the available surpluses are allocated between the 'consumer' (the renter) and the 'producer' (the Crown land administrator).

But it is fundamentally wrong to imply that setting price at opportunity cost means that the renter receives no share of the value. Opportunity cost, by definition, includes a 'normal' rate of return to all factors of production required to produce a particular resource.

The economic significance of opportunity cost is that it identifies the payment required to secure a particular resource for its best possible use. To the extent that any price is set above opportunity cost, the implication is that some degree of market power is being employed. The economic efficiency and welfare implications of such practice is that, because of excessively high pricing:

- the particular good will be under-produced and under-consumed
- consumers will face higher prices or the discontinuation of previously available services
- surplus will be transferred from consumers to the seller
- the seller will attract monopoly rents
- society will suffer a deadweight social welfare loss.

The fact that consumers, in this case, are businesses providing downstream services to final consumers means that social deadweight loss spreads to other markets. By charging higher prices than competitive levels for access to tower sites, Crown land agencies increase the costs of telecommunications operators, infrastructure providers and co-locators. In some cases, this means that services will be withdrawn because they become economically non-viable. It appears that this has already occurred in the case of some co-locators. Service providers who continue operation, will pass some of these higher costs on to consumers in the form of higher prices and/or decrease service quality. This will mean a loss of consumer surplus benefits in these markets as well.

This loss of consumer welfare is a concern in any context, but it is of particular concern in rural and regional Australia where radio services are an important part of the ability of small regional operators such as taxi companies, bus companies and farmers to conduct their businesses and provide goods and services to final consumers. Rural communities often suffer from blackspots in mobile phone coverage and radios play an important role in maintaining communications with a technology that is robust, reliable and well understood by long-term users. Loss of radio services is likely to particularly affect regional and rural businesses and loss of services will likely result in increased costs and loss of regional employment.

5 COMPLIANCE WITH LEGAL PRECEDENT

5.1 FEDERAL COURT DECISION

The IPART review document on *inter alia* pages 13 and 14 notes the relevance of the *Telecommunications Act 1997 (Cth)* to their deliberations on pricing principles. The Act seeks to ensure the long-term interest of end users, efficiency and competitiveness of the telecommunications sector and the availability of accessible and affordable carriage services. To the extent that IPART's proposed pricing principles endorse excessive use of market power and economically inefficient pricing, they arguably contravene all of these principles.

Further, the Act stipulates that State law has no effect to the extent that it "discriminates, would have the direct or indirect effect of discriminating, against a particular carrier, a particular class of carriers or carriers generally." It is far from clear that the pricing principles enunciated by IPART do not discriminate against, in particular, co-users of communication towers compared with the typical commercial arrangements available to co-users on towers sited on private land.

It is significant to note the Federal Court of Australia in the case of *Telstra Corporation Ltd v State of Queensland*[4] found in favour of Telstra. In this case Telstra brought an action against the State Government of Queensland for overcharging for leases for communication towers on Queensland Government land.

In the judgement of the Federal Court:

- The Honourable Justice Rangiah rejected the State Government's arguments and stated that "price-gouging of this type" was "precisely the type of conduct" the Telecommunications Act was designed to prevent. The Federal Court found the State law unfairly discriminated against carriers, and said it would be more appropriate for telcommunication carriers to be placed in the business category and charged rent based on 6 percent of the land valuation rather than set dollar amount per site; and

4 [2016] FCA 1213 (14 October 2016). Available at www.austlii.edu.au/cgi-bin/sinodisp/au/cases/cth/FCA/2016/1213.html

- The Honourable Justice Rangiah also found the State Government had failed to prove that the rates it had set for Telstra were reasonably comparable to private sector lease prices (refer to paragraph 212 of the judgement), and that the law denied carriers a right to appeal the rent they were charged.

As a result, the Honourable Justice Rangiah held that the discriminatory sections of the Queensland *Land Regulation Act* were invalid.[5] The Queensland Government was required to repay Telstra $16.2 million in overpayments plus interest and court costs.

Given this Federal Court precedent, there are strong arguments that A Review of the Current Schedule of Rentals for Telecommunication Sites Located in NSW, 25 March 2013 undertaken previously by BEM Consultants is outdated and a new complete valuation exercise needs to be undertaken again by IPART.[6] This is due to market changes (for example, the NBN deployment would have set new market prices) and importantly to comply with the Federal Court precedent in Telstra Corporation Ltd v State of Queensland.

It should be noted that the methodology that the Queensland Government applied to charging prior to the Federal Court decision was to divide the State into three zones, namely urban, medium density rural and low density rural, on the basis that the median and average rents for land used for communication purposes within each of these zones is different. The State of Queensland's case was to the effect that each State lease within a particular zone has approximately the same rental value. This rental value is approximately the median rent for private leases in each zone.

An important feature of this methodology is the reasoning that State leases were sufficiently homogeneous that all communications leases within a particular zone can be taken to have approximately the same rental value (see paragraph 205 of the Judgement). This methodology was explicitly rejected by the Federal Court (see paragraphs 211 and 212 of the Judgement).

Further, paragraph 209 of the Federal Court's Judgement, states "the factor which demonstrates the unlikelihood of the proposition … [that] rents reflect private

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5 Queensland Government ordered to pay $17m back to Telstra After court finds state rental lease laws invalid. itnews, https://www.itnews.com.au/news/qld-govt-ordered-to-pay-17m-back-to-telstra-464442

6 This is because the current IPART prices in Table 2.3 of the IPART Review are based on BEM figures increased by inflation.

market rents is the observation of … that over 80% of Telstra's State leases have annual rents that exceed the Valuer-General's valuations of the land itself."

5.2 APPLICATION IN NEW SOUTH WALES

Given the IPART pricing proposals for Crown Land in NSW are also based on four location categories of Sydney, High, Medium and Low and we would contend, that such broad categories of lease rates are lacking the granularity to reflect private market rents in the site locations, and hence do not comply with the Federal Court decision in *Telstra Corporation Ltd v State of Queensland.* It should also be highlighted, even though we have not undertaken a detailed valuation comparison given the short time to reply to the IPART Review, the annual rents of many sites would seem to exceed the NSW Valuer-General's valuations of the land itself.[7] This factor was found by the Federal Court to be a strong indicator that market based lease rates were not being applied.

As for the possible way forward, the Honourable Justice Kangiah opined in *obiter dicta* in *Telstra Corporation Ltd v State of Queensland* that if the valuer had gone "further by using more sub-market areas and taking into account more variables, the methodology he used might well have been adequate to allow a single rental value for each sub-market area to be accepted. While such an exercise would have been time consuming and expensive, the State has conceded that it carries the onus of proof on the issue." (see paragraph 210 of the Judgement).

This approach of having more granular pricing categories may therefore provide a method for IPART to set market-based lease prices (based on land valuation) in NSW in the future. If this is not done there would seem to be avenue for lessees and/or potential lessees to make a complaint to NSW Civil and Administrative Tribunal (NCAT) which has jurisdiction in relation to the majority of site leases in NSW.[8]

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7 This is especially the case in rural areas of the State.

8 The NCAT legislation seems to apply to the leases of land under the *Crown Land Management Act 2016 (NSW)* and the *Forestry Act 2012 (NSW)* but not to site leases to which the *National Parks and Wildlife Act 1974 (NSW*) applies.

6 CHARGES FOR CO-USERS

6.1 IPART POSITION ON CHARGING FOR CO-USE

IPART reports that (p23):

> *In previous reviews, many stakeholders called for the complete abolition of co-user fees. They argued that these fees enable land management agencies to benefit from infrastructure provided by primary users, which is separate from the site, and thus constitutes 'doubledipping' by the agencies.*

IPART maintains the view that user charges are appropriate based on advice from Property Consultants. This advice maintains that leasing arrangements vary in that in some cases "a traditional head lease arrangement will apply" in other cases "the landowner will require separate agreements with subtenants".

The BEM report states (p18) that:

> *Further to our earlier comment, under a traditional head lease arrangement, the primary user would pay a rent reflecting not only its use, but also the potential to sub lease the site to other users.*
>
> *Such an arrangement can be beneficial or disadvantageous to a lessor and lessee given the agreed rent may not fully reflect a circumstance where there are either few or many users.*

The statements are correct; the fact that the head lease arrangement may be beneficial or disadvantageous to either party reflects normal commercial uncertainty which is not a barrier to ongoing commercial activity. BEM further states that:

> *The co-user fee arrangement aims to more accurately reflect the use of a site at a particular point in time by charging a rental for only the primary and co-users.*
>
> *By comparison with the head lease arrangement, the co-user arrangement provides a reduced rental to the primary user given it only reflects the primary user's use of the site. Theoretically, because the primary user pays a reduced site rental, the savings achieved (compared to a head lease rental) would be passed onto a co-user. The reality is that many co-users may not receive a reduction in rent from the primary user/infrastructure provider and simply see the co-user site rental as an additional fee.*

6.2 PROBLEMS WITH BEM'S LOGIC

The logic of this discussion is questionable. The statement that "the co-user arrangement provides a reduced rental to the primary user given it only reflects the primary user's use of the site" strongly implies that such an arrangement will be unambiguously advantageous to the primary user. This may not be the case. The critical point is that is deemphasised in this assertion is that the "reduced rental to the primary user" is granted conditional on the exclusion of co-users. The primary user may, in fact, prefer an arrangement that enables it to pay a negotiated rental to the landowner and accommodate co-users on a commercial basis that is unencumbered by additional co-user charges and to pay "fair and market-driven" fee on these terms.

If IPART wishes to assert the advantages of an arrangement for primary users that provides "reduced rental" contingent on the exclusion of co-users, it should demonstrate that such arrangements occur in market-driven arrangements for the use of private land by tower operators.

It is important to emphasise, that in a normal commercially driven market process of negotiation between landowner and renter, that the primary user renting the property will form a view about the commercial potential to generate earnings from co-users. It is highly likely that such primary users will have a better information about the marketplace than the managers of Crown land agencies and attempts buy them to apportion and define the benefits of occupancy accruing to primary users and co-users a likely to result in inefficient outcomes at best.

The argument that "theoretically, because the primary user pays a reduced site rental" implies that it will charge lower fees to co-users is flawed because primary users, irrespective of what they pay in rental, will still have an incentive to charge what a competitive market will bear so this argument cannot be used to support the proposed pricing model.

There are many, many models by which co-location or co-use activities are undertaken – from cost sharing (eg Uber shared rides), to primary user responsibility (eg sub-letting in residential property markets) to charging of co-users in addition to a commercial rent. BEM focussed their arguments on the latter and (by omission) imply it is the most common practice. In practice, globally there has been the development of a network of consultants to help organisations negotiate leases – usually representing tower owners. The context of their argument is that negotiations are complex because the issues of value are complex. This further supports a position that the negotiations are best handled by a market approach that has the flexibility to adjust. The context is possibly

best summarised by PWC[9] (in the context of the telecommunications market – but similar argument apply in radio networks) who note that:

> *for telco operators facing intensifying market completion and mounting pressure on costs and pricing, the idea of tower sharing with other providers brings major attraction…. As well opening the way to potential reductions in both operating and capital costs, tower sharing can help an operator focus more effectively on marketing and customer satisfaction, by reducing the internal burden of asset management. Yet despite these attractions, successful tower sharing deals remain few and far between, and efforts to set them up remain fraught with pitfalls and barriers.*

In summary, the complexity in the market means that it should be left to make decisions on the basis of economic value – and the context of towers, the entity best place to review this is the tower owner/investor.

6.3 ATTEMPTING TO REPLICATE MARKET-DRIVEN PROCESSES WITH BUREAUCRATIC PROCESSES LEADS TO RESOURCE MISALLOCATION

The wider problem with this pricing methodology is that it applies a fixed pricing schedule and fixed co-location discounts (50%, for example, to some users) to primary and co-users which constitute, in effect, an attempt to approximate what competitive outcomes would tend to be. This is a significantly problematic enterprise in which rules-of-thumb and bureaucratic processes are assumed to be capable of producing facsimiles of market outcomes.

If it were the case that primary uses preferred an arrangement where lower rentals were charged on the basis of excluding co-location, then we would expect such practice to be common practice on private land. This is not the case. The more common practice is for primary users to negotiate rental rates and terms that allow them to accommodate co-users on a commercial basis. Note that in the case of telecommunications carriers, additional land charges for these carriers are more common. But in this case, the distinction between co-users and telecommunications carriers is critical. It is unusual in commercial private land transactions for co-user, who have relatively minor infrastructure requirements to be charged at all by landowners. ARCIA stakeholders commented that additional charges for co-users on private land “were unheard of”.

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9 Tower Sharing - Maximise the use of your resources, 2010, pwc.

The practice of charging additional fees for co-users significantly increases the amount of revenue that Crown land agencies can attract from each site. In many cases of co-location, the impact on costs for the Crown land agency is zero or very small. In practice, the number of co-users could be higher than 5 on any given tower and this could lead to Crown land agencies generating revenue significant multiples higher than that generated by the primary user. Such an outcome is clearly not consistent with a pricing practice that promotes "fair, market-based commercial returns".

Such an outcome would be far removed from that which could be expected to be obtained in a competitive market-based process. We could imagine a hypothetical situation in which tower operators had a significant number of site alternatives for a particular piece of tower infrastructure and conducted negotiations with multiple land owners to find the most attractive terms. We would expect a competitive market would drive price and terms to rough equality across different but substitutable potential sites. Imagine also that these negotiations included terms for co-users. Some landowners would be happy to charge tower operators less and share the upside if multiple co-users came onto the site while other landowners would prefer to secure a larger certain payment from the tower operator and not sharing co-user payments. Landowners' decisions would be primarily driven by their risk and time preferences.

Irrespective of the terms of agreements between landowners and tower operators in respect of co-users, it is inconceivable that, in such a competitive environment, that one site would generate returns to landowners that were significant multiples of the average returns.

If, by way of contrast, a particular site was unique in that there was no site that was an alternative to it, the fact that it could generate rents multiples higher than other sites where there were more alternatives is more likely to indicate the use of monopoly power rather than a higher underlying opportunity cost.

6.4 UNINTENDED CONSEQUENCES OF IPART'S PRICING PRINCIPLES

6.4.1 A REDUCTION IN TOWER SHARING AND TOWER PROLIFERATION

As the rental charges for primary and co-users increase on Crown land, the incentive to seek sites on private land increases. In case studies develop this report, we give examples of primary and co-users abandoning Crown land sites because of increased rents and moving to private land sites. Typically, these sites are inferior from a technical coverage perspective and, in some cases, these moves entail the construction of new towers.

Thus, the proposed pricing principles will further encourage the construction of new towers and disincentivises tower-sharing. These outcomes are inefficient from multiple perspectives:

- the quality and coverage of services from inferior sites is likely to be degraded;
- efficiency of spectrum usage will be diminished;
- total capital costs associated with providing services will be increased;
- an unnecessarily high level of resources will be devoted to tower construction and maintenance; and
- environmental disamenity associated with towers will be increased.

We believe that creating incentives for and supporting infrastructure sharing is a critical role for governments. This is a view shared globally and supported by telecommunications regulators including in Australia.[10]

The economic benefits of infrastructure sharing can be substantial and can be summarised as:

- optimisation of the use of scarce resources such as land/building roof-space;
- reductions in investment between sharing operators, enabling lower prices for consumers;
- facilitating the disruption of anti-competitive market structures;
- reducing barriers to providing competitive services including in rural and remote areas;
- improved quality of network service, particularly in congested areas;
- focusing of investment in technological and service innovation and on network expansion; and
- increased consumer choice of network providers and services.

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10 During discussions at the ITU Global Symposium for Regulators (GSR-18) and in the 2018 Best Practice Guidelines adopted by regulators, the importance of defining adequate regulatory measures to foster infrastructure and spectrum sharing practices was highlighted. See GSR-18 Best Practices Guidelines www.itu.int/en/ITU-D/Regulatory-Market/Pages/bestpractices.aspx

It should be noted that the approach in the IPART Review is orthogonal to the approach in other markets like the United States and Indonesia[11] where regulators and Governments are facilitating access and reducing the fees for access on public land. Exhibit 7 provides a case study from the United States. The FCC has mandated that fees must now only amount to being "a reasonable approximation of the state or local government's costs" and these are capped a USD500 for co-locators. These policies a driven by the objective of maximising infrastructure sharing and accelerating service roll-out and quality.

Exhibit 7: United States Case Study

The ***USA's*** FCC recently adopted new rules streamlining the wireless infrastructure siting review process to facilitate the deployment of next-generation wireless facilities or 5G in the United States. The FCC's *Accelerating Wireless Broadband Deployment Order*, WT Docket 17-79[12] focuses on ensuring the Commission's rules properly address the differences between large and small wireless facilities, and clarifies the treatment of small cell deployments.

The Order *inter alia* excludes small wireless facilities from *National Historic Preservation Act (NHPA)* and *National Environmental Policy Act (NEPA*) review, concluding that these facilities are not "undertakings" or "major federal actions." However, small wireless facilities deployments continue to be subject to currently applicable state and local government approval requirements.

The FCC has also ordered that fees must now only amount to being "a reasonable approximation of the state or local government's costs", that "only objectively reasonable costs are factored in", and that the fees be no higher than those charged to similar competitors in similar situations.

Non-recurring fees, including a single upfront application that can cover up to five small cells, are capped at USD500 for co-location deployments, with the application of each additional small cell thereafter to cost USD100. Non-recurring fees for new infrastructure is to be capped at USD1,000. Recurring fees, including right-of-way (ROW) access fees, are capped at USD270 per small cell per year.

The requirement that compensation be limited to a reasonable approximation of objectively reasonable costs and be non-discriminatory applies to all state and local government fees paid in connection with a provider's use of the ROW to deploy small wireless facilities including, but not limited to, fees for access to the ROW itself, and fees for the attachment to or use of property within the ROW owned or controlled by the government (eg, street lights, traffic lights, utility

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11 On 31 December 2018, the Indonesian Government issued a *Joint Ministerial decree entitled Guidelines for Joint Development and Utilization of Passive Telecommunications Infrastructure* between MoCI and Ministry of Internal Affairs as a guideline for local government to regulate the ducting. poles and towers including for 5G small cells. In Bahasa Indonesia, *Surat Edaran Bersama Mendagri dan Menkominfo tentang Pedoman Pembangunan dan Penggunaan Bersama Infrapasif Telekomunikasi*, No. 555/11560/SJ, No. 3 of 2018.

12 Available at www.federalregister.gov/documents/2018/10/15/2018-22234/accelerating-wireless-and-wireline-broadband-deployment-by-removing-barriers-to-infrastructure

poles, and other infrastructure within the ROW suitable for the placement of small wireless facilities).

"This interpretation applies with equal force to any fees reasonably related to the placement, construction, maintenance, repair, movement, modification, upgrade, replacement, or removal of small wireless facilities within the ROW, including, but not limited to, application or permit fees such as siting applications, zoning variance applications, building permits, electrical permits, parking permits, or excavation permits."

The FCC also set rules on the ability for US local and state governments to object to 5G deployments based on aesthetics, saying they must be reasonable, similar to those applied to other infrastructure deployments, and "objective and published in advance".

The FCC considers that those actions will reduce regulatory impediments to deploying small cells needed for 5G and help to expand the reach of 5G for faster, more reliable wireless service and other advanced wireless technologies to more Americans. This forms part of the FCC's comprehensive strategy to *Facilitate America's Superiority in 5G Technology* (the 5G FAST Plan).[13]

Similar issues have recently been raised by Singtel Optus in its March 2019 paper entitled "*Unlocking the Potential of 5G: Deployment Reform*".

6.4.2 RED TAPE AND ADDITIONAL TRANSACTION COSTS

In addition to these considerations of competitive outcomes and monopoly power, regard needs to be given to the transactions costs associated with separate primary and co-user fees. It is likely that competitive processes would work to minimise transactions costs as both parties have a significant incentive to reduce them – we would expect the market to 'compete out' inefficient unnecessarily costly outcomes. In contrast, bureaucratic processes tend to not reduce transactions costs to the extent that markets do and, instead, attempt to attract additional resources to fund their ongoing operation.

Several stakeholders have pointed to needing to process lengthy Crown contracts (around 70 pages), long delays involved in transacting with government departments causing months of delay to infrastructure deployment, and high compliance costs in terms of information requirements demanded by Crown land agencies.

13 It should be noted that the strategy includes three key components: (1) pushing more spectrum into the marketplace; (2) updating infrastructure policy; and (3) modernizing outdated regulations. See https://docs.fcc.gov/public/attachments/DOC-354326A1.pdf

7 ECONOMIC IMPACTS OF HIGHER COSTS FOR COMMUNICATIONS PROVIDERS

As we have noted above, governments should attempt to maximise social welfare and, in relation to pricing, opportunity cost represents a price that is economically efficient and social welfare maximising.

We observed that the degree of monopoly power that Crown land communication tower sites have varies from absolute to significantly high. In some cases alternatives to Crown land sites may be available but often this is not the case.

Furthermore, it is becoming increasingly difficult for tower operators to obtain approvals for new tower development and to the extent that this constrains the development of new sites, the market power of landowners in areas where there are few alternatives is commensurately increased.

The extent of structural monopoly characteristics in the market for communications towers creates the opportunity for monopolistic behaviour. Industry participants have expressed concerns that Crown land sites are charging excessive rents compared with sites on private land. As we have indicated above, the question of whether co-location fees are charged is somewhat peripheral to the question of the overall level of charges and costs faced by primary users and co-users.

Structural monopoly is not, per se, a cause for concern and, in some cases, for example in the case of natural monopolies, may be preferable to competitive market structures. The abuse of market power occurs where a monopolist or quasi-monopolist uses the intrinsic scarcity of their product or service to restrict supply and raise prices. The negative consequences of such behaviour on consumer and social welfare and overall economic efficiency have been described above (see Section 4).

In pragmatic terms, it is difficult to definitively say whether an abuse of market power is occurring in a particular situation or not. One way to get some idea of whether monopoly prices are being charged is to look at market outcomes in the real world. For example, if an abuse of market power were occurring in the market and communication towers on Crown land we would expect to observe some or all of the following:

- users relocating to alternative sites on private land even where those sites were technically inferior from a coverage perspective
- the construction of new communication towers relatively proximate to existing ones on Crown land
- discontinuation of some services by primary users or co-users
- higher rental prices Crown land sites than for comparable private land sites
- higher rates of return per unit area on Crown land compared with private land used for communication towers.

If such outcomes are occurring (and input from industry stakeholders indicates this is the case) the results will be not only the general economic impacts indicated by economic theory – social welfare loss in general and efficiency (discussed in Section 4) – but also:

- decreased availability and/or increased costs of wireless services
- a reduction in infrastructure sharing and communication towers proliferation of communication towers as primary users and co-users seek cheaper alternatives
- decreased efficiency of industries using wireless services as an input because of increased costs or non-availability of services
- decreased efficiency of spectrum usage because of increasing use of suboptimal tower sites
- Gross State Product and employment being lower than it would otherwise be particularly in rural and regional New South Wales.

7.1 AN EXAMPLE OF THE ECONOMICS OF RADIO SERVICE PROVISION IN RURAL NEW SOUTH WALES

it is important to distinguish between telecommunications operators and radio network operators in assessing the impact of Crown lands these on the viability of providing services. This document is primarily concerned with radio network operators who typically site radio infrastructure on communication towers operated by telecommunications operators or infrastructure operators.

It is important to note that, on a per-site basis, especially in rural and regional areas, the economics of service provision for tower co-users is often quite marginal. Critically, private and Crown land/infrastructure rental costs for radio network operators are a significant component of total costs, making up around 50 per cent of total capital and operating costs.

Exhibit 8 provides an anonymized real-world example from rural New South Wales of expected costs and revenues for a radio services network installation on a particular tower provided by an ARCIA stakeholder. It can be seen from this example that the commercial proposition is marginal without Crown land rents, but that the additional cost of $8,249 per year or $41,245 over the five year analysis makes this proposition decisively loss-making (note that the figures in the table are not discounted).

Exhibit 8: Example of co-user site costs and revenue

	Costs capital and annual	Years	Estimated annual revenue
Investment	30,000	Year 1	18,000
Annual Site Rental	9,520	Year 2	24,000
ACMA Licences	3,600	Year 3	30,000
Maintenance	1,000	Year 4	30,000
Monitoring	1,200	Year 5	30,000
IP connectivity	4,800		
5-year Cost	**130,600**	**5 Year Revenue**	**132,000**
Add NSW co-user fees	8,249		
5 years of NSW Fees	41,245		
Total 5-year cost	**171,845**		
	Percentages		
Percentage of private site rental in total costs	0.28		
Percentage of Crown land rents in total costs	0.24		
Percentage of rents in total costs	0.52		

This discussion indicates that the provision of services by co-users is sensitive to the costs imposed under IPART's proposed pricing principles. In many cases, especially in rural and regional New South Wales, the proposed prices had the potential to make service provision loss-making and, in the long run, this situation will lead to the withdrawal of services from such areas.

In discussions with ARCIA, WPC were advised that multiple examples exist of services being terminated because of higher Crown land rental charges. The fact that this represents a loss of business and employment for radio network operator companies is significant in its own right but, from an economic perspective, there is also a significant loss of social welfare from the loss of services to downstream radio service end users. Note that these end users may also be private or public organisations themselves who are offering further downstream services to individuals. Thus, the cumulative loss of social welfare

from the discontinuation of services can be significant. Furthermore, in rural areas where mobile phone communications are often less reliable than in urban areas, radio communications make up an important part of the overall communications framework in these communities and having such services terminated can have a negative impact on the viability of these communities.

7.2 CASE STUDIES FROM ARCIA STAKEHOLDERS

ARCIA stakeholders have provided the following information to reinforce the message that excessive pricing of land rentals for co-users has a material and retrograde impact on their capacity to provide services.

The names of the parties have been anonymized and are presented in a generic manner to protect confidential information.

Again, these case studies show that Crown land rentals have a significant impact on the viability of radio network operators to provide services. They also indicate how excessive pricing causes resources to be inefficiently allocated, for example, as evidenced by the unnecessary construction of new tower infrastructure and through the siting of communications infrastructure at some optimal locations.

CASE STUDY 1

In 2018 a radio network provider (RNP) had a requirement to boost coverage on a site on the NSW Central Coast. This was primarily driven by 2 bus operators who needed to improve safety in order to comply with new Government legislation.

The RNP identified a suitable site. The tower at this site operated by a Communications Tower Operator (CTO). There was space for a small shelter inside the compound and room was available on the tower. The tower is on Crown Land which required the RNP to deal with both the CTO and the Department of Lands.

The site rental negotiated between RNP and CTO was $21,000 per annum. The Department of Lands required an additional fee of $14,380 per annum which made the provision of the radios service uneconomical.

In this case, there were only 2 clients for radio services with a total of 200 radios between them. The fees that would be required of downstream users to make this service viable beyond the capacity of in radio users to pay.

In this the RNP choose to acquire an alternative site which was inferior but was on private rather than Crown Land. This is not always possible in this particular case but alternatives are not always available as Crown land agencies control the majority of mountain top land in NSW.

CASE STUDY 2

In 2018 at an existing site in rural NSW which is operated by a CTO and on Crown Land, a RNP, was paying around $20,000 per annum to the CTO and under the old IPART scheme it was entitled to a 50% discount on Crown Land fees as it was classified as a local service provider. With this discount the annual fees amounted to about $6,000.

The 50% discount was abolished after the last IPART review and the RNP's 5-year agreement ended in June 2018. The Department of Lands informed the RNP that it would now need to pay the prevailing rate following most recent expiry which would be around $15,000 per annum. This increase would make the service at that site and economic. After this round of price increases, Vodafone, which had been operating from the site, decided to build its own tower on private property next to the Crown Land. Following the construction of the new tower The RNP moved its equipment to this new location resulting in savings of around $15,000 per year.

CASE STUDY 3

In 2010 a RNP had some equipment on a town in rural NSW. As a result of the new IPART pricing practices the RNP was forced once again to move to an adjoining tower on private property, at a site with inferior coverage characteristics, which, nonetheless, enabled them to save $15,000 per annum and maintain the service to downstream users.

CASE STUDY 4

For over 30 years a RNP operated two towers in rural NSW. The two towers were about 1 km apart with receivers on one tower and transmitters on the other joined by an underground cable.

When the land was managed by NSW Forestry the towers were treated as a single installation with a split operation of services. The land has recently been transferred to National Parks which is now requiring the RNP to pay two sets of rental for this installation. This will mean an increase in costs from $20,000-$31,000 per annum. In addition, National Parks are expected to approach all of the RNP's clients at this site which will render some services uneconomic and result in significant reductions in revenue.