Before the National Competition Council

In the Matter of the

FMG Access Application

Statement of

JOSEPH P. KALT, Ph.D.

May 2, 2005

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I. Witness Identification and Qualifications

A. My name is Joseph P. Kalt. I am the Ford Foundation Professor of International Political Economy at the John F. Kennedy School of Government, Harvard University, Cambridge, Massachusetts 02138. I have also been the Kennedy School's Academic Dean for Research, Faculty Chair of the Environmental and Natural Resources Program, Faculty Chair of the Economics and Quantitative Methods Section, Chair of Degree Programs, and Chair of Ph.D. Programs. In addition, I work as a senior economist with Lexecon, an FTI Company, 20 University Road, Cambridge, Massachusetts 02138. Lexecon is an economics consulting firm specializing in matters of antitrust and regulated industries.

B. I hold B.A., M.A., and Ph.D. degrees in economics and am a specialist in the economics of competition, antitrust, and regulation, with particular emphasis on the natural resource and transportation sectors. Throughout my professional career I have conducted research, published, taught, and testified extensively on the economics of competition, regulation, and antitrust analysis.

C. At Harvard, I served as an Instructor, Assistant Professor, and Associate Professor in the Department of Economics (1978-86) prior to joining the faculty of the Kennedy School of Government as a Professor with tenure in 1986. In the Department of Economics, I had primary responsibility for teaching the graduate and undergraduate courses in the economics of regulation and antitrust. At the Kennedy School, my teaching responsibilities have included the economics of regulation and antitrust, economics of public policy, and natural resource and environmental policy.

D. In the course of my academic and consulting experience, I have intensively researched the economics of transportation, especially the changing regulatory

and competitive landscape of the U.S. and other nations' railroad industries. As summarized in my accompanying curriculum vitae (Attachment 1), I have testified numerous times as an expert on issues of competition and regulation in the transportation sectors. This has included testimony before state and federal courts and regulatory agencies in the United States, including the U.S. Surface Transportation Board, which has primary responsibility for regulating U.S. railroads. I have also provided expert testimony before the United States Congress, as well as the Federal Court of Australia.

E. In the present proceeding, I have been asked by Allens Arthur Robinson, attorneys for Rio Tinto Iron Ore, to provide examination of the economics and regulatory treatment of the rail access requested by Fortescue Metals Group (FMG), as these would be viewed from the perspective of the economics of U.S. regulatory and antitrust policy applicable to essential facilities.

F. In Section II below, I provide an overview of the Australian and U.S. approaches to "essential facilities" and summarize my conclusions regarding the differences between the approaches. Section III then discusses the economic issues raised by the concept of "essential facilities" and describes the economics underlying U.S. essential facilities policy. Section IV analyses the differences between the application of the "practical and reasonable" standard in the U.S. and Australia. Section V examines FMG's planned Pilbara iron ore operations and request for access to BHP Billiton Iron Ore's (BHPBIO) rail facilities in Western Australia through the lens of the economics undergirding U.S. policy applicable in analogous settings.

II. Statement of Issues and Summary of Conclusions

A. Statement of Issues:

1. The NCC may recommend declaration only if multiple declaration criteria are met, including Criterion (b): It would be uneconomical for anyone to

develop another facility to provide the service.[1]

2. The NCC's application of Criterion (b) is closely tied to the economic concept of natural monopoly. The NCC points to the Duke EGP decision to define the term "uneconomical," stating (with italicized emphasis added):

> "We agree with the submissions of NCC that the 'test is whether for a likely range of reasonably foreseeable demand for the services provided by the means of the pipeline, it would be more efficient, *in terms of costs and benefits to the community as a whole*, for one pipeline to provide those services rather than more than one.'"[2]

3. Given this articulation of "uneconomical," Criterion (b) of the NCC's essential facility access determination turns on whether the facility in question "exhibits natural monopoly characteristics."[3] That is, is the cost structure in the market such that one firm can meet demand at a lower cost than would be incurred by society were two or more firms to be operating? The NCC approach to essentiality and access does not turn on whether it would be feasible and practical for a new entrant to provide its own facilities.

4. I have been asked to compare the NCC approach under Criterion (b) with the U.S. approach to determining whether a facility is "essential". I have also been asked to comment on the economic and public policy principles underpinning the US approach and their application to the FMG matter.

B. **Summary of Conclusions:**

1. As discussed in detail in Section III below, U.S. essential facilities policy does not contemplate the court or regulatory authorities applying and

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[1] TPA III 1974 at section 44G(2).

[2] The National Access Regime: A Guide to Part IIIA of the Trade Practices Act of 1974: Part B: Declaration, National Competition Council, December 2002, at 38.

[3] The National Access Regime: A Guide to Part IIIA of the Trade Practices Act of 1974: Part B: Declaration, National Competition Council, December 2002, at 43.

conducting a relative social cost calculation as a component of an access declaration. Rather, among a group of four key tests, the U.S. applies an absolute feasibility test, asking whether an entrant requesting a declaration of access would find it infeasible or impractical to provide its own facilities.

2. The economic rationale for the U.S. approach is found in the fact that, if it is practicably and reasonably feasible for a new entrant to build its own facility (as the evidence in this case indicates with respect to FMG's proposal – see Section V below), an incumbent is confronted with the prospect of actual entry. This very prospect raises concerns in the NCC framework that actual new entry will result even where the building of new facilities is socially wasteful (i.e., where the incumbent can provide all service without suffering degradations in the quality of service and more cheaply than the combination of the incumbent and an actual new entrant).

3. U.S. policy, on the other hand, recognizes (i) that the very fact of the feasible entry of new facilities implies that there is a credible threat that current business served by the incumbent may bypass the incumbent and use the new entrant's facilities; and (ii) this credible threat puts the incumbent under pressure to consider offering the would-be entrant access to the incumbent's facilities. When it is economic for the incumbent to offer such access and the incumbent's service can be provided at lower incremental cost than the cost of the would-be entrant's costs of building and operating new facilities, rational conduct will lead the parties to avoid the building of the new facilities and the would-be entrant using the incumbent's facility. In other words, the U.S. approach under its criterion #2 uses the forces of the marketplace to perform the social cost test on the efficiency or waste of new facilities.

III. The Economics of Essential Facilities and Essential Facilities Policy

A. In terms of competition and antitrust policy in the United States, the economic and competition policy issues raised by FMG's application would fall under the doctrine of *essential facilities*.

1. The essential facilities "doctrine" represents a set of economic principles and associated policy guidelines governing conditions under which sound public policy intervenes in the economic relations between parties in the marketplace by mandating access to activities or facilities when those activities and facilities are asserted to be unique or otherwise necessary ingredients for the provision of services to the marketplace.

2. Essential facilities questions classically arise in transportation industries where, for example, an existing railroad may have the only feasible pass through a mountain range, or the only feasible bridge over a waterway. Under such circumstances, the infeasibility of other alternatives can, but does not necessarily, raise concerns of market power.

B. In the United States, implementing such concepts in the practice of public policy has been the province of U.S. courts. In particular, four criteria must generally be proven in order for a facility to be considered "essential" for antitrust purposes, and for policy to potentially impose rules of mandatory access.

1. These criteria have been set out with clarity in an important antitrust case of the present era, *MCI v. American Telephone and Telegraph.* These criteria are:

   (i) "control of the essential facility by a monopolist";
   (ii) "a competitor's inability practically or reasonably to duplicate the essential facility";
   (iii) "the denial of the use of the facility to a competitor"; and
   (iv) "the feasibility of providing [access to] the facility."[4]

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[4] MCI Communications Corp. v. American Tel. and Tel. Co., 708 F.2d 1081 (7th Cir. 1983) (hereinafter "MCI"), at 1132-33.

2. The first of these criteria focuses on market power - whether the facility in question is controlled by a firm that has the ability and the incentive to restrict the supply (and thereby raise the price) of goods and services that use that facility from reaching the marketplace. Before declaring a facility "essential", the third criterion of the US essential facilities doctrine requires a firm seeking to use the facility and compete in a related downstream and/or upstream market show that it has actually been denied access to the putatively essential facility, either through direct denials of access or through indirect denials in the form of usurious terms and conditions that make it uneconomic and, thereby, impractical for would-be entrants to utilize the incumbent's essential facility. Criterion #4 of the U.S. policy recognizes that it may not be operationally feasible for the firm in control of a putatively "essential" facility to share that facility with third parties and U.S. policy does not mandate that a facility be shared if such sharing would be impractical or would materially inhibit the incumbent firm's ability to serve its customers adequately. If and to the extent third-party access would degrade or destroy the quality of service made possible by an otherwise "essential" facility, mandated access is correspondingly contrary to downstream consumers' and/or upstream sellers' interests.

3. In the rest of this section, I will provide an in-depth examination of Criterion #2, which sets forth the standard for whether a competitor can "practically and reasonably" duplicate a facility. The economic rationale for the U.S. policy is compared with the Australian Criterion (b), whether it would "be uneconomical for anyone to develop another facility to provide service."

4. Criterion **#2 – Impractical and Unreasonable to Duplicate.** At the heart of U.S. essential facilities doctrine is the concept that, to be *essential*, a facility must be a source of monopoly (or monopsony) power and must not be economically feasible to duplicate. It is not sufficient that it be less

expensive to provide third parties access to a firm's facilities than to build new facilities.

a) As enunciated in *JamSports v. Paradama Productions, Inc.*:

> "Essential means essential; it does not mean 'the most economical.' [citation omitted] Nor does it mean 'best' or 'preferable.' A facility is not essential even if it is widely preferred by consumers and producers in the market, as long as there is an alternative (albeit inferior) venue."[5]

b) Economically, the attribute of "essential" entails conditions such that building alternative facilities is infeasible in the sense of not reasonably or practically possible (e.g., due to the incumbent's control of essential, non-reproducible inputs or due to exclusive control of required authorizations).

c) In *Twin Laboratories, Inc., v. Weider Health & Fitness Twin Labs*, a manufacturer of health supplements, sought access to advertising space in health and fitness magazines, arguing that the magazines represented an essential facility for reaching potential customers. The US Court of Appeals for the Second Circuit found:

> "As the word 'essential' indicates, a plaintiff must show more than inconvenience, or even some economic loss; he must show that an alternative to the facility is not feasible. [citation omitted] Since Twinlab has failed to make such a showing, we hold that its essential facilities claim fails."[6]

d) Thus, U.S. policy does not ask whether the would-be entrant can

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[5] JamSports and Entertainment, L.L.C. v. Paradama Productions, Inc., 336 F.Supp.2d 824 (hereinafter "JamSports"), at 839 (D.C. Ill. 2004).

[6] Twin Laboratories, Inc. v. Weider Health & Fitness, 900 F.2d 566 (hereinafter "Twin Labs"), at 570 (1990). In one case, the U.S. courts have seemed to define feasibility by an absolute cost standard in which the plaintiff's costs of providing the facilities exceed the revenues it might thereby garner (in contradiction of "even some economic loss"). In Hecht, the district court stressed that: "To be 'essential' a facility need not be indispensable; it is sufficient if duplication of the facility would be economically infeasible and if denial of its use inflicts a severe handicap on potential market entrants." Hecht v. Pro-Football, Inc., 570 F.2d 982 (D.C. Cir. 1977), certiorari denied by Pro Football, Inc. v. Hecht, 436 U.S. 956, 992-93 (1978). See also, Fishman v. Estate of Wirtz, 807 F.2d 520, 540 (7th Cir. 1986) and Cf. Fishman v. Estate of Wirtz, 807 F.2d 520, 540 (7th Cir. 1986).

duplicate the functions of the incumbent's putatively essential facilities at lower cost than the incumbent would incur to provide access to its facilities. Moreover, the entrant cannot prevail by showing that it would find its own costs would be in excess of its revenues if it attempted to provide its own facilities.

(1) Consider the position of a would-be participant in an upstream input market and/or a downstream sales market that is being denied access to another firm's extant facilities used in participating in the market(s). If it is unlawful for additional facilities to be added by third parties, or if a third party adding facilities would need access to a unique resource or input that is only available through or to the incumbent (e.g., perhaps the only pass through the mountains where a railroad might feasibly be located), duplication of the functions performed by the incumbent's putatively essential facilities would be unreasonably impractical and infeasible.

(2) Under such circumstances, a complainant could expect to satisfy the second criterion of the U.S. essential facilities doctrine.

e) It is evident that U.S. policy has a stringent test of feasibility under its Criterion #2. When a would-be entrant can practically duplicate the incumbent's facilities, U.S. policy respects lawfully acquired positions created by the substantial investments of pioneers and fears the deleterious free riding incentives that an alternative policy would create if would-be entrants had incentives to delay their own investment in order to wait for mandated access to a pioneer. Under such incentives, all access would be discouraged since the pioneer would have incentives to be a non-pioneer waiting, perhaps in vain, for the first-round entrant to invest its sizeable capital.

C. The Economics of Criterion #2

1. As compared to the NCC statement of its criterion (b) as a social cost test, the U.S. approach under Criterion #2 of "not practically or reasonably feasible to duplicate" constitutes a tougher standard for those seeking mandated access to challenged facilities to meet than the NCC practice of requiring only that a claimant show that its otherwise feasible alternatives are more expensive than compelling the incumbent to provide access.

   a) Clearly, the U.S. approach does not contemplate a social cost-benefit test in the hearing room. In *JamSports v. Paradama Productions*, JamSports contended that Clear Channel Communications had barred it from an essential facility, namely a facility in which to hold a supercross event. Commenting on JamSports' argument, the U.S. District Court for the Northern District of Illinois writes:

> "JamSports and Baade contend that the availability of substitutes does not necessarily defeat its essential facilities claim, because the facilities from which JamSports was allegedly barred were preferable to the facilities that were available to it. Clear Channel argues that JamSports and Baade's arguments are based on a misapprehension of the relevant law. The Court agrees...This contention assumes that 'essential' means 'best,' 'most profitable' or 'preferable.' But that is not what essential means for purposes of antitrust law. Essential means essential; it does not mean 'the most economical.' [citation omitted] Nor does it mean 'best' or 'preferable.' A facility is not essential even if it is widely preferred by consumers and producers in the market, as long as there is an alternative (albeit inferior) venue."[7]

   b) In City *of Anaheim, et al., v. Southern California Edison Company*, the U.S. Court of Appeals for the Ninth Circuit made clear that a facility will not be deemed essential merely because it is the least cost alternative. In this case, the Cities requested firm access to Edison's high transmission lines, know as the Pacific Intertie. Edison denied this request, citing capacity constraints. The Court writes:

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[7] JamSports at 839.

> "[I]f the facility can be reasonably or practically duplicated it is highly unlikely, even impossible, that it will be found to be essential at all...In short, there was no dearth of available power. Nor, as a matter of fact, did inability to obtain Pacific Northwest Power preclude the Cities from obtaining power at reasonable rates to meet their needs and the needs of their customers. As the district judge recognized, 'the Cities' whole argument [citation omitted] asks the Court to turn the essential facility doctrine on its head. Rather than seeking to impose a duty to deal based on the harm that would result to competition from the monopolist's refusal, the Cities seek to impose a duty to deal based on the extent to which a competitor might benefit if it had unlimited access to the monopolist's facility.' In short, the fact that the Cities could achieve savings at the expense of Edison and its other customers is not enough to turn the Pacific Intertie into an essential facility."[8]

c) In *Midwest Gas Services v. Indiana Gas Co., Inc.*, the U.S. Court of Appeals for the Seventh Circuit writes:

> "Though the plaintiffs say, probably correctly, that '[a] direct interconnect to the Indiana Gas pipeline from Storage's field would have been the most economical way to do this,' the most economical route is not an essential facility when other routes are available."[9]

2. By eschewing mandated access when a would-be entrant can feasibly duplicate the functions of the incumbent's facilities, U.S. policy leaves the test of the social costs and benefits to the marketplace. This can be seen with a straightforward example:

   a) Consider a would-be entrant currently being denied use of an incumbent's facilities that could provide the entrant with access to a production chain and the markets that production chain serves. Suppose the entrant investigates the prospect of building its own facilities and bypassing what it would otherwise have to get from the

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[8] Anaheim at 1381.

[9] Midwest Gas Services v. Indiana Gas Co., Inc., 317 F.3d 703 (7th Cir. 2003), certiorari denied by Midwest Gas Services, Inc. v. Indiana Gas Co., Inc., 540 U.S. 817 (2003), at 714.

incumbent and finds that the cost of building its own facilities would be $200. Suppose further that the entrant investigates the markets it could reach if it did build its own facilities and finds that it could reasonably expect to realize net revenue after paying all other costs, but before paying the cost of building its own facilities, of $300. Assuming no legal prohibition to doing so, it is thus reasonable and practical for the entrant to build its own facilities, since by doing so it would generate $300 in net revenues with which to pay $200 for the bypass facilities – leaving it with net profit of $100 (= $300 - $200).

b) Under U.S. policy, this would-be entrant would not be expected to prevail in an action seeking mandated access to the incumbent's facilities. Clearly, alternatives to the incumbent's facilities are feasible and practical. However, because the entrant's alternative is economically practical and reasonable, it represents a credible threat of entry. How should the incumbent respond?

c) If the incumbent continues to deny access, the entrant will build its facilities and enter the market(s); and the incumbent may thereby lose upstream input suppliers and/or downstream customers to the entrant. In fact, if the incumbent has upstream monopsony power and/or downstream monopoly power, the incumbent faces loss of such market power.

d) At the very least, the incumbent, if it continues to deny access, forgoes the opportunity to get some access revenue from the entrant. In fact, by offering the entrant access at a charge of $199 (i.e., one dollar less than the entrant's cost of building its own bypass facilities), the incumbent would (1) induce the entrant to forgo building new bypass facilities and (2) realize access revenues of $199. Either way, the incumbent will lose upstream input supplies and/or downstream sales, and perhaps market power, since the entrant will enter regardless of whether the incumbent offers access. At any offer of access greater

than $200, the entrant will enter by building its own facilities. Would the rational incumbent make the offer to provide access at a charge of $199?

e) There are a number of possibilities. If it is the case that providing the entrant access to the incumbent's no-longer-essential facilities would disrupt the ability of the incumbent to serve its post-entry customers and/or input suppliers such that (1) the loss in net revenue contribution due to their dissatisfaction[10] plus (2) the incumbent's direct costs of serving the entrant would cost the incumbent more than $199 in net revenue, the rational incumbent would not offer access at $199. In fact, the incumbent would not offer access at any charge less than the direct cost of serving the entrant plus the net revenue loss from service degradation caused by provision of third-party access. Nor would it be in society's interest for the incumbent to do so: service degradation is every bit as much a cost to the nation's economy as the $200 needed for the entrant to build and operate its own facilities.

f) On the other hand, if the incumbent could provide the entrant with access and generate access revenues from the entrant that exceed the incumbent's direct cost of service plus any net revenue losses due to service degradation, the rational incumbent will do so. Thus, for example, suppose access can be provided without degrading service over the incumbent's facilities, and that it will cost $150 to service the entrant.

g) In the example at hand, the incumbent is a natural monopolist in the sense that its single facility can meet the market's demand for service at lower cost than the combination of the incumbent and an entrant with its own facilities.

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[10] Relative to the net revenue realizable by the incumbent if the incumbent avoids the service degradation by continuing to deny access.

h) Confronted with the incumbent's offer of access priced at $199, the entrant will forgo bypass and choose to use the incumbent's facilities. Setting such a charge for access yields the incumbent gross access revenue of $199 and net profit of $49 (i.e., $199 in access charge revenues less $150 in access service costs). If the incumbent does not make this offer of access, the entrant enters anyway (by building its own facilities) and the incumbent passes up the opportunity to increase its profits by $49.

(1) Note that in this instance the interplay of market forces has performed the social cost-benefit test on whether or not it is wasteful to build the entrant's new bypass facilities: When the incumbent's costs of providing access (i.e., $150 in the example) are less than the entrant's costs of building the bypass facilities (i.e., $200), it would be wasteful to society to build the new facilities. The same service can be provided to the market(s) by simply using the incumbent's facilities at lower cost ($150). Yet, it is in precisely such situations that the rational self-interests of the incumbent led it to provide access at a charge that "beats" the entrant's option of building facilities itself. And when the relative costs are reversed (i.e., it is socially less costly for the entrant to build than to provide access via the incumbent's facilities), the incumbent cannot afford to block the entrant. That is, the marketplace correctly performs the social cost-benefit test.

IV. Differences Between the U.S. and Australian Application of the "Reasonable and Practical Duplication" Standard

A. These foregoing results are the direct consequence of U.S. Criterion #2 – i.e., *not* mandating access if the entrant's alternative is feasible.

1. If the entrant's alternative is feasible, but the entrant would incur losses to enter, its threat of entry is not credible. The incumbent is then under little

pressure to provide entry, but policy eschews mandating entry because it has therein identified conditions under which the initial entrant – the incumbent – is a pioneer that has found a way to enter a market and made the investment to do so.

2. On the other hand, when the would-be second entrant can feasibly duplicate the incumbent's facilities and can do so at costs which its revenues could cover, its threat of entry is a credible threat to the incumbent, even if access is less socially costly than the entrant's alternative of building new facilities. This compels the incumbent to respond; in so doing, the marketplace performs the social cost-benefit test on whether or not it is socially efficient to duplicate the incumbent's facilities. If it is not, entry will be blocked, access will be provided by the incumbent, and wasteful duplication of facilities will be avoided. U.S. policy finds this approach preferable to the Australian approach, which effectively substitutes hearing-room litigation for marketplace negotiation.

B. Indeed, the U.S. approach takes advantage of the *naturalness* of natural monopoly. That is, natural monopoly is termed "natural" by economics because the attribute of natural monopoly – i.e., a single firm can satisfy market demand and lower cost than any combination or configuration of smaller firms – results in the "natural" (i.e., unregulated and unmandated) structure of the market as being the single, efficient firm.

1. In the case of a new entrant confronting an incumbent in control of putatively essential facilities, the numerical examples we have examined in Section III drive this point home: When the installation of duplicate facilities would fail the social cost-benefit test and be socially wasteful (because providing access to the incumbent's facilities would be a less expensive alternative), access does not have to be mandated. Rather, where access is less costly and would not unduly disrupt the incumbent's ability to sustain the quality of its services, or otherwise impose onerous costs on the incumbent, access is the result of natural, market forces of self-interest.

2. While it might be objected that market forces can make errors, note that it is a false standard to place such market forces up against some vision of a court/regulatory process that is costless and without error of its own. The operative assumption of the U.S. approach is that business firms are interested in making profits. This presumption drives the results of Section III.

   a) Note that under the U.S. approach, the incumbent firm is interested in making profits. When a credible entrant fails in its bids to have access mandated by the court, the entrant still gains access to the market via the incumbent's facilities – and the incumbent makes money by selling such access. While the incumbent might prefer that the new entrant not find entry feasible and credible, given feasible and credible entry, the incumbent's best option is to try to prevent the duplication of facilities by selling facilities access to the new entrant. What sound public policy should do, in general, is prevent the incumbent from being able to manipulate the regulatory processes of approval, permitting, and the like that the new entrant needs to create its credible threat that it will build its own facilities.[11]

   b) While other motives can be imagined, it is sound competition policy to make the assumption – as the U.S. approach does – that private firms are interested in maximizing their profits. Indeed, this underlies not only U.S. essential facilities policy, but everything from our policy concerns about excessively concentrating mergers (i.e., a post-merger firm acquiring market power can be expected to utilize that power to the detriment of consumers and the economy), to prohibitions on price fixing conspiracies (i.e., while we can *imagine* a sellers' conspiracy to fix prices so as to maximally benefit consumers, such imaginings are just that).

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[11] Harry G. Broadman and Joseph P. Kalt, "How Natural is Monopoly? The Case of Bypass in Natural Gas Distribution Markets," *Yale Journal on Regulation*, (1989) volume 6, at 181-208.

C. Several aspects of the essential facilities setting enhance the reasonableness of the presumption of rational business conduct that undergirds the U.S.' stringent policy toward mandating access.

1. First, as suggested above, essential facilities settings commonly involve small numbers of incumbents and would-be entrants. The FMG case illustrates the point. Under such circumstances, transactions costs associated with negotiating, exchanging offers, and the like are hardly an impediment to reaching mutually beneficial market exchanges (such as the sale of access by the incumbent to the entrant).

2. The costs of providing access can become significant when the granting of access entails large costs and complications of coordination within the incumbent's and entrant's operations. This can be the case, for example, when two railway companies are trying to use the same infrastructure of tracks, switching yards, and the like, and it is necessary to negotiate complicated and hard-to-enforce rights of priority to switching, track times, etc. Of course, it is precisely under such circumstances that the likelihood is high that access by a third-party entrant would so disrupt service as to render such access wasteful to consumers. Both U.S. policy (under Criterion #4) and Part IIIA (under the public interest criterion in s44G(2)(f) and the exclusions to the definition of Service in s44B) provide bases for denying essentiality claims and attendant access requests under such circumstances.

3. Further impetus to the approach which relies on market forces to perform the social cost-benefit test re: access v. addition of new facilities is provided by the fact that essential facilities questions most commonly arise, and arise with the greatest force, around questions of third-party access to *infrastructure*. Facilities such as railroad track beds and yards, natural gas pipelines, and the like are characterized by substantial sunk costs if they are built, and relatively high ratios of fixed costs to variable costs.

a) A basic insight of economics is the irrelevance of fixed and sunk costs

once they are fixed and sunk when it comes to a profit-seeking business' decision as to what price to sell and how much output to produce. Rather, profit-seeking businesses maximize profits when certain costs are invariant with respect to output by focusing on the "margin": How much *additional* revenue will be generated at what *additional* cost if we raise output. So long as the answer to this question is a net addition of revenues over costs, output should be increased so that more free cash is available to pay for fixed costs and perhaps have money left over as profit.

b) The implication of these very basic economics for essential facilities settings is to create a keen interest on the part of incumbents in selling access to credible entrants whenever possible (i.e., when the incumbent is a natural monopoly because access to its facilities by the third party is less costly than having the third party build its own facilities). The last thing the incumbent wants is for the entrant to sink its costs into and onto the ground, thereby eschew any need for access to the incumbent's facilities, and proceed to compete on the basis of variable cost. Such wasteful duplication of facilities is a disaster for incumbent and entrant alike. The avoiding of such disaster is a powerful marketplace force, giving policy reason for the U.S. approach to relying on the market to decide access questions when Criterion #2 is failed by the entrant.

c) If the infrastructure nature of prototypical essential facilities settings creates the prospect of destructive competition and impetus for efficient market-driven access decisions, the other side of the same coin is that the preeminent sources of natural monopoly are the kind of high fixed-and-sunk cost/low variable cost character that commonly applies to infrastructure-type facilities and operations. Such cost structures imply that larger, single operations have lower unit costs than smaller operations, since the larger operations spread fixed costs

over larger volumes. Thus, the single, large firm may be naturally monopolistic.[12] Yet, it is so because of its infrastructure character and attendant high fixed-and-sunk cost/low variable cost operations; and these are precisely the conditions under which incumbents have the greatest incentive to avoid the error of inducing entry of facilities that are not needed (i.e., that fail a social cost-benefit test).

D. From a policy perspective, then, the U.S. approach has the distinct advantage of using competing parties' respective self-interest to compel them to assess accurately the costs and benefits of their alternatives, and to act on those alternatives in accord with their self-interest.[13]

1. The alternative of declaring essentiality and mandating access when the entrant's alternative is found by a court or regulatory authority to be more costly than the direct costs of service and the value lost by upstream and downstream market participants due to degradation of service that may be associated with mandated access to the incumbent's facilities asks the system of adversarial litigation to yield judgments that can actually be compelled by the market.

2. The adversarial system of court or regulatory hearings confounds parties' incentives to maximize their profits from their *business* operations by making their profits depend critically on their performance in the hearing process – via such avenues as presentation skills, cross-examination skills, venue selection, and the like. Then, too, the system asks individuals and organizations – the court or the regulatory authority – to make judgments in areas where they are unlikely to possess the same level of business knowledge and experience as the businesses involved in the dispute themselves. It is for good reason that sound public policy seeks to create conditions under which the forces of the marketplace perform social cost-

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[12] Large, in this context, must always be assessed relative the magnitude of market demand.

[13] Nobel Prize-winning economist Ronald Coase discusses socially efficient, privately negotiated outcomes. See Ronald Coase, "The Nature of the Firm," *Economica,* (1937) volume 4, at 386-405.

benefit tests such as those implied by the decision to mandate access to putatively essential facilities.

3. Then, too, the process of successful negotiation of efficient access through market forces, as described above, is confounded while litigation is pending – leaving the would-be entrant to assert that the incumbent will not provide access. But while litigation is pending, the parties' rights are uncertain – and such uncertainty makes fruitful marketplace dealings inordinately difficult. On the other hand, as we have seen, if a would-be entrant has a credible threat of feasible entry, U.S. criterion for mandated access imply the rejection of such access by antitrust authorities. At that point, marketplace negotiations are rid of the litigation-related uncertainty and the transactions costs of negotiations are reduced and incentives for negotiation clarified.

E. As a result of the emphasis on identifying natural monopolies through a litigation-based, rather than market-based, social cost-benefit assessment, the Australian essential facility framework as applied by the NCC (although on my reading of S44G(2)(b) of the TPA not apparently prescribed by the wording of the provision) provides a less stringent test for access than the U.S. standard.

1. From the numerical example in Section III above, it is clear that, under the NCC approach, a would-be new entrant might well be able to launch a demonstration at hearing that its costs of installing new facilities are far greater than the costs of allowing it access to the incumbent's facilities. After all, a social cost-benefit test may well ignore the incumbent's sunk costs (society has already used its resources for the incumbent's sunk infrastructure), while giving full credit to the new entrant's as-yet not-sunk costs. The entrant-applicant's incentives are to invest in evidence, argument, and pedagogy that convinces a tribunal that the incumbent's costs of providing access are really lower, and the entrant's costs of new facilities are really higher, such that the new facilities option fails the social cost-benefit test.

2. By contrast, under the U.S. approach, when an applicant fails the stringent feasibility test of Criterion #2 (i.e., it **is** economically feasible to construct another facility), the incumbent's incentive is to invest in figuring out exactly what it's own costs of providing access actually would be, and exactly what the entrant's true costs of new facilities will be. Similarly, the entrant's incentives are accurate assessment of actual costs of access v. new facilities. Failure to follow such incentives puts either party at a negotiating disadvantage when access is left to the market under the U.S. approach.

F. In short, the U.S. essential facilities policy is consistent with the welfare-enhancing goals of not only preserving and enhancing competition and avoiding wasteful duplications of facilities, but also avoiding the substitution of adversarial litigation for the judgments of the marketplace on such matters as whether it is less expensive for the incumbent to provide access than for a new entrant to build new, additional facilities.

V. Examination of FMG Claims Under U.S. Essential Facilities Policy

A. In light of the review of U.S. policy, let's consider FMG's request for access through the lens of US Criterion #2 discussed above. I first set out a description of FMG's proposed rail operations in the Pilbara and then consider how US policy would treat FMG's access claim in light of those proposed rail operations.

B. FMG's Proposed Rail Operations

1. FMG has three primary alternatives for transporting ore from its Pilbara mines: it can construct a new rail line from those mines to Port Hedland; it can seek government-mandated access to BHPBIO's rail system through the application of a declaration for access by the NCC; or it can negotiate for access with BHPBIO.

a) FMG has announced that it is pursuing the first of these alternatives with respect to Mount Nicholas, Christmas Creek, and Mount Lewin,

and it is apparently pursuing the second with respect to the Mindy Mindy deposit. As is described in more detail below, FMG is pursuing the building of railway lines and associated infrastructure to service mines at Christmas Creek and Mount Nicholas irrespective of the outcome of its application to the National Competition Council.[14]

b) In addition to proposing to build its own railway lines, FMG is seeking access on BHPBIO's lines. In June of 2004, FMG filed an application for declaration of a service with the NCC to gain access to railway lines owned by BHPBIO in the Pilbara region.[15] In this application, FMG seeks access to portions of the Mount Newman and Goldsworthy rail lines in order to gain access to rail lines that can provide service from the mine that will be developed at Mindy Mindy to Port Hedland.

2. Request for Declaration of Service

a) On June 15, 2004, FMG filed with the NCC an application under Part IIIA of the TPA for the declaration of a service. The services the application seeks to have declared are: (i) part of the Mount Newman Railway line that runs from Mindy Mindy in the Pilbara region to the port facilities at Nelson Point in Port Hedland (approximately 295 km), and (ii) part of the Goldsworthy Railway line that runs from where it crosses the Mount Newman Railway line to the port facilities in Finucane Island in Port Hedland (approximately 17 km).[16]

b) In its application for service, FMG states that it wants access to "enable FMG to optimize the utilization of its own rail infrastructure together with the Provider's [BHPBIO] rail infrastructure in a mutually advantageous way. FMG envisages this will effectively result in

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[14] FMG Press Releases, August 23, 2004, November 10, 2004 and December 15, 2004.

[15] FMG Application under Part IIIA of the Trade Practices Act 1974 for Declaration of the Service Provided by BHP Billiton, June 11, 2004.

[16] In its decision of December 15, 2004, the NCC found that the Goldsworthy line was not considered a service under the TPA because it was subject to the production process exception. (See NCC Preliminary

organization of the combined assets of FMG and the Provider to facilitate the most efficient use of the Facility and FMG's own infrastructure."

c) In other presentations or announcements (and in paragraph 7.3(6) of its application), FMG explains that it plans to use both its own railway lines and the railway lines of BHPBIO in a "looped" configuration. For example, a map that FMG has provided of proposed railway lines under a declaration of a service shows that traffic would run north towards Port Hedland on the BHPBIO line, while traffic would run south from Port Hedland on the newly constructed FMG railway line that runs closely parallel to the BHPBIO railway line. FMG claims, "looped line would create virtually unrestrained capacity on the railway line"[17] and would prevent delays due to track congestion.

d) The configuration proposed by FMG is likely to require a high degree of coordination between the operations of FMG and BHPBIO, particularly since FMG is apparently proposing that, to maximize "efficiency," traffic on the BHPBIO line will move from south to north. FMG appears to be requesting not only access, but some ability to control and coordinate the operations of trains across the two companies.

3. Construction of New Railway Lines

a) Concurrently with trying to gain access to BHPBIO's railway lines, FMG is moving forward with a plan to build its own railway lines in the Pilbara region. Indeed, FMG has announced its intention to construct its own railway lines that stretch from port facilities in Port Hedland going south-southeast to resources at Christmas Creek and Mount Nicholas and according to the preliminary environmental

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Decision.)

[17] Fortescue Metals Group Ltd, "Beneficial Effects of Declaration of the BHP Billiton Railway Line," June 15, 2004, at 1.

review, potentially Mindy Mindy.[18] Based on these plans, FMG appears to have an economically feasible alternative to BHPBIO's rail lines for service from Pilbara to Port Hedland.

b) In order to bring iron ore to the marketplace, FMG has focused on designing, constructing, and financing rail and port infrastructure to support the sale of iron ore. Structurally, the rail and port assets are to be owned by The Pilbara Infrastructure Pty Ltd (TPI), a subsidiary of FMG. TPI will need to build a significant amount of infrastructure in order to move the iron ore in Pilbara mines to a port where they can be exported. The infrastructure that will be owned by the TPI includes:

- berths;
- hundreds of kilometers of rail lines from Port Hedland to Pilbara mines;
- rail sidings, signaling systems, and other components of the railway line;
- train unloaders at the port facilities;
- stock pile pads;
- reclaimers;
- ship loaders at the port facilities;
- beneficiation plant;
- train sets;
- loading facilities; and
- stock yard equipment.

c) FMG has begun the process of procuring the requisite environmental reviews from the Western Australian government. In September 2004,

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[18] FMG Press Releases, August 23, 2004; November 10, 2004 and December 15, 2004. See also Public Environmental Review: Pilbara Iron Ore and Infrastructure Project: Port and North-South Railway (Stage A) (hereinafter "PER Stage A"), Revision 4, September 2004, Fortescue Metals Group, written by Environ Australia Pty Ltd. Public Environmental Review: Pilbara Iron Ore and Infrastructure Project: East-West Railway and Mine Sites (Stage B) (hereinafter "PER Stage B"), January 17, 2005, Fortescue Metals Group, written by Environ Australia Pty Ltd.

FMG released a preliminary environmental report seeking environmental approvals for the first stage of the railway lines it seeks to build. The first line was to run north-south from Mindy Mindy to Port Hedland (the "Mindy Mindy line"). In January 2005, FMG filed the second of its preliminary environmental reviews for railway lines running east-to-west from the north-south line, connecting to Christmas Creek, Mount Lewin, and Mount Nicholas mines.

d) I am instructed that FMG's commitment to build a railway relates to the line from Mount Nicholas and Christmas Creek and the main trunk line of the Mindy Mindy line from Port Hedland to the intersection with the Christmas Creek/Mount Nicholas line. To date, no contract appears to have been entered into in relation to that part of the Mindy Mindy line that runs from the main trunk line to Mindy Mindy.

e) Despite requesting a declaration for access, FMG is also concurrently moving forward with plans to build its own infrastructure. As it states in the Preliminary Environmental Review, "FMG is pursuing the development of its own port and railway facilities as it has not yet been able to gain access to existing BHPBIO infrastructure."[19] Therefore, despite requesting a declaration for access, FMG has committed to construction of its own line for a very substantial part of the distance between Mindy Mindy and the port and all of the distance between Christmas Creek/Mount Nicholas and the port. FMG's preliminary environmental review suggests a rail line to Mindy Mindy is indeed feasible. As such, FMG appears to have shown that it has an economically feasible alternative for rail service to access over BHPBIO's rail lines.

C. Criterion #2: A Competitor's Inability Practically or Reasonably to Duplicate the Essential Facility

1. In the U.S. policy context, Criterion #2 requires that it be impractical and unreasonable to duplicate the facility for which access is being requested. As we have seen, the courts' criterion of "not practically or reasonably feasible to duplicate" constitutes a tough standard for those seeking mandated access. Under this stringent standard, if a new entrant could reasonably be expected to cover its costs with its revenues, a facility would not be essential.

2. In the case at hand, FMG has demonstrated with its words and its actions that building its own facilities is feasible in both the "possible" sense and in the sense that FMG would be able to recover its costs if it built its own facilities and did not have access to BHPBIO's, at least for about two-thirds of the distance in respect of which track access is sought.

    a) By moving forward with building a rail line to serve much of the same traffic for which it would like a declaration, FMG has demonstrated that it can likely be expected to cover its costs in a private investment sense.

    b) In fact, FMG has made statements that it will build the rail line whether access is granted or not.[20]

3. In the U.S. context, if an entrant can "practically and reasonably" enter and provide a service, then a U.S. court would be unlikely to grant access.

    a) All of the actions and statements regarding the construction of a railway line would be considered when deciding whether to grant access. The statements and actions of FMG in this case – notably, statements by FMG that they will build whether or not they are granted mandatory access – would demonstrate that the facility is not essential.

    b) Of course, as the economics discussed above demonstrate, assuming that after a review of the facts, U.S. policy would not find that the

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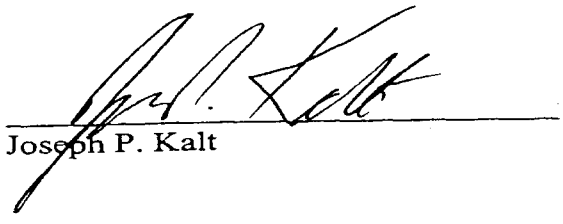
[19] PER Stage A at vii.

court should grant access, a denial of FMG's request for access is not the end of the story in the U.S. setting. Rather, if FMG's threat of entry on its own is credible, the issue of access would then be turned over to the marketplace and its inherent capacity to perform society's cost-benefit test regarding the need for FMG's proposed facilities. In fact, the same result would hold in the Australian context if FMG were denied access and Australian firms are profit-seeking.



Joseph P. Kalt

[20] See FMG Press Release, January 11 2005; PER, Stage A at vii.