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PICKING UP ON WHAT'S GOING UNDERGROUND: AUSTRALIA SHOULD EXEMPT CARBON CAPTURE AND GEO-SEQUESTRATION FROM PART IIIA OF THE TRADE PRACTICES ACT

Adam M. Andrews[†]

Abstract: Australia has identified carbon capture and geo-sequestration (“CCS”) as a partial solution to the problem of global warming. CCS involves capturing carbon dioxide from large point-source emitters, such as power plants, and injecting it deep below ground level for disposal. Australia has not yet enacted CCS-specific regulations. As it stands now, Australia’s third-party access law, Part IIIA of the Trade Practices Act, creates regulatory uncertainty for CCS infrastructure projects and will deter investment in the industry. This regulatory uncertainty results from the ambiguous criteria used to determine whether a piece of infrastructure is appropriate for third-party access.

Legislators could address the ambiguity of Part IIIA by creating an industry specific third-party access regime for CCS. However, doing so would be difficult without foreknowledge of how the industry will develop, would generate significant compliance costs, and would also likely deter investment. In the near term, CCS should be exempted from Part IIIA altogether to encourage private companies to invest in CCS. Exemption would provide investors with the expectation that they can recoup the costs of their investments without submitting to mandatory access requirements.

I. INTRODUCTION

Australia has identified a process called “carbon capture and geo-sequestration” (“CCS”) as a viable way to both address the problem of global warming and continue to use fossil fuels for energy.¹ CCS is the process of first trapping flue gases from large point-source emitters, then capturing the carbon dioxide from those gases, compressing that carbon dioxide, transporting it, and finally, injecting it deep underground for disposal.² CCS depends upon established science but has not yet been

[†] Juris Doctor expected 2009, University of Washington School of Law. The author would like to thank Professor Brendan Sweeney for his explication of Australian competition law. He was invaluable in refining this piece and in fleshing out the treatment of the Trade Practices Act. Specifically, he pointed out that the abuse of market power provisions contained in Section 46 complement the third-party access regime of Part IIIA. The author would also like to thank Professor Dongsheng Zang, Professor Dwight Drake, Professor Veronica Taylor, Stephanie Kotecki, Tom and Lauren Andrews, and the Braintrust at 338 NE 51st for their ongoing support and boundless wisdom.

¹ Australian Greenhouse Office, Dep’t of the Environment and Heritage, Commonwealth of Australia, Carbon Dioxide Capture and Storage Fact Sheet (2006), <http://www.greenhouse.gov.au/ccs/publications/pubs/fs-ccs.pdf>.

² Intergovernmental Panel on Climate Change, *Special Report on Carbon Dioxide Capture and Storage*, 19 (B. Mertz et. al., eds., 2005) [hereinafter IPCC Report].

implemented on a significant scale.³ The cost of capturing carbon dioxide remains a serious obstacle to widespread adoption of CCS, but in the minds of many scientists and politicians this obstacle is surmountable when considered against the backdrop of the alternatives.⁴ Because world energy forecasts predict continued global reliance on fossil fuels for decades to come,⁵ CCS stands as an important mitigation strategy over the medium term.⁶

Many CCS projects around the world are in development.⁷ The largest of these projects will be the Gorgon development just off the northwest coast of Australia, expected to be operational in 2010.⁸ The natural gas fields there contain between 12% and 14% carbon dioxide.⁹ Normally, a natural gas developer would simply vent that carbon dioxide into the atmosphere.¹⁰ Instead, the petroleum companies operating Gorgon will sequester the carbon dioxide into a saline aquifer deep below nearby Barrow Island.¹¹

Australian lawmakers have begun to develop state and federal legal frameworks to govern the nascent CCS industry. At the federal level, the Commonwealth issued a set of Guiding Regulatory Principles to give direction to the various states in developing consistent laws for CCS.¹² More recently, the Commonwealth suggested that federal CCS legislation will be based on the Offshore Petroleum Act.¹³ Amending the Offshore Petroleum Act would be in line with developments at the state level in Queensland and South Australia.¹⁴ In drafting future laws, legislators face the dilemma of how to regulate a new industry.

³ Int'l Energy Agency [IEA], *Legal Aspects of Storing CO₂*, 14 (2005), available at http://www.iea.org/textbase/nppdf/free/2005/co2_legal.pdf.

⁴ See Matthew Wald, *In a Test of Capturing Carbon Dioxide, Perhaps a Way to Temper Global Warming*, N.Y. TIMES, Mar. 15, 2007, at C3.

⁵ International Energy Outlook 2007, U.S. ENERGY INFORMATION ADMINISTRATION, DOE/EIA-0484 (2007), available at [http://www.eia.doe.gov/oiaf/ieo/pdf/0484\(2007\).pdf](http://www.eia.doe.gov/oiaf/ieo/pdf/0484(2007).pdf).

⁶ IPCC Report, *supra* note 2, at 20-21.

⁷ *Id.* at 33.

⁸ IEA Greenhouse Gas R&D Programme, Projects Database – Gorgon Gas Development, http://www.co2captureandstorage.info/project_specific.php?project_id=122 (last visited Dec. 29, 2007).

⁹ *Id.*

¹⁰ *Id.*

¹¹ See Barrow Island Act, 2003 (W. Austl.), available at http://www.austlii.edu.au/au/legis/wa/consol_act/bia2003145/index.html.

¹² Aust. Gov't, Dep't of Indus., Tourism, and Res., *Carbon Dioxide Capture and Geological Storage (CCS) Development of Regulatory Framework*, <http://www.ret.gov.au/Industry/Coal/Pages/CarbonDioxideCaptureandGeologicalStorageCCSDevelopmentofRegulatoryFramework.aspx> (last visited Feb. 11, 2008).

¹³ *Id.*

¹⁴ See Petroleum and Gas (Production and Safety) Act, 2004, §§ 12, 13 (Qld.) (Queensland added carbon dioxide to the definition of petroleum in its petroleum law. As a result carbon dioxide may be

This Comment considers the application of Part IIIA of Australia's Trade Practices Act ("TPA") to the CCS industry. Part IIIA is Australia's default third-party access law and could be applied to infrastructure in any industry.¹⁵ Part IIIA regulates a third-party private company's access to critical infrastructure, and allows for the creation of specific access regimes for industries prone to natural monopolies.¹⁶ This Comment argues that Part IIIA creates regulatory uncertainty for CCS investors and will deter investment in the CCS industry. Part IIIA was enacted to support competitive marketplaces.¹⁷ For a new industry like CCS, any benefits to competition in the future are highly speculative, while the negative impacts for the investment climate are current and concrete. The uncertainty created by Part IIIA heaps risk on an industry whose future is already plagued with unknowns.

This Comment makes two basic assumptions. First, it assumes that Australia will establish a carbon tax or cap-and-trade scheme that attaches a price to emitting carbon dioxide.¹⁸ Until emitting carbon dioxide costs money, there cannot be any significant market for services that avoid emissions. Without a market, Part IIIA cannot promote market competition through third-party access.¹⁹

Australia will likely establish a carbon tax or cap-and-trade scheme. In December of 2007, Kevin Rudd, Australia's new Prime Minister, ratified the Kyoto Protocol, signaling to the world that Australia will redouble its efforts to address climate change.²⁰ The new government announced that by 2050 it will reduce emissions by 60%.²¹ The centerpiece of that strategy is a nationwide emissions cap-and-trade scheme that Rudd will put in place in 2010.²² Rudd also renewed the government's pledge to pursue clean coal.

transported and injected underground according to the standards laid out for natural gas transmission and storage.); Petroleum Act, 2000, part 1, div. 3 (S. Austl.) (South Australia took similar measures to allow transport and storage of carbon dioxide under its petroleum law.).

¹⁵ See RUSSELL V. MILLER, MILLER'S ANNOTATED TRADE PRACTICES ACT 186 (27th ed. 2006).

¹⁶ See Trade Practices Act, 1974, Pt. IIIA, § 44(G)(2)-(4) (Austl.); see, e.g., National Third Party Access Code for Natural Gas Pipeline Systems, 1 (1997) (establishing a third party access regime for natural gas pipelines, enacted by each of Australia's state governments), available at <http://www.coderegistrar.sa.gov.au/code.htm>.

¹⁷ MILLER, *supra* note 15, at 185.

¹⁸ I base this premise on the pledge of the new government in Australia to enact a cap and trade scheme, see *infra* notes 20-24 and accompanying text.

¹⁹ See *infra* Part III.

²⁰ Media Statement, Kevin Rudd, Ratifying the Kyoto Protocol (Dec. 3, 2007), available at <http://www.labor.com.au/media/1207/mspm030.php>.

²¹ *Id.*

²² *Id.*

The net effect of these policies will be to put a price on emitting carbon dioxide and to encourage zero-emission electricity production, for example, burning coal for electricity in combination with CCS. The cap-and-trade scheme will slowly ratchet up the price of emissions as the government lowers the cap to meet its 2050 60% reduction target.²³ The Rudd government will likely model its scheme on the design suggested by the National Emissions Trading Taskforce.²⁴

Second, this Comment assumes that Australia will rely primarily on private capital to develop CCS infrastructure and provide CCS services. It is likely that Australia will rely on private capital because of the trend away from government owned enterprise and toward a reliance on the market to provide services.²⁵ If, however, the Australian government does take a major role in financing CCS services and infrastructure, then the thesis of this Comment—that Part IIIA deters private investment—becomes moot.

This Comment proceeds in four parts. Part II of this Comment provides background on Australia's third-party access law and CCS to explain the purpose of Part IIIA of the TPA and its intended purview. Part III demonstrates that the criteria for access provided by Part IIIA do not generate firm expectations as to whether third-party access to CCS infrastructure will be required. Part IV critically examines Australia's access framework for natural gas pipelines to show that developing a similar regime for CCS is premature and creates an unjustifiable regulatory burden. Part V argues that the ambiguity of Part IIIA's criteria and the regulatory burden posed by an industry specific regime necessitate the exemption of CCS from Part IIIA.

²³ National Emissions Trading Taskforce, *Possible Design for a National Greenhouse Gas Emissions Trading Scheme* xv (Discussion Paper, 2006) [hereinafter NETT], available at http://www.emissionstrading.nsw.gov.au/_data/assets/pdf_file/0010/2017/Discussion_Paper_-_Full_document.pdf. A detailed discussion of such schemes is beyond the reach of this paper, but a few points are worth noting. First, the emissions trading scheme will focus on stationary energy producers. Second, the initial allocation of emission permits will be a function of current usage with a remainder sold by auction. Third, market forces will determine the value of the permits and in turn the associated cost of emitting carbon dioxide. Fourth, the price of emitting carbon dioxide and in turn the incentive to sequester it will depend on the level the cap is set at, the pace at which the cap declines, and the penalty for emitting without a permit. Estimates range from a price of between \$5 and \$15 per ton initially with an eventual price between \$25 and \$35 by 2060. At these levels, CCS (using current technology) would only be viable for lower cost installations.

²⁴ BAKER & MCKENZIE, CLIMATE CHANGE AND RENEWABLE ENERGY: A NEW ERA FOR AUSTRALIA, 4 (2007), http://www.bakernet.com/NR/rdonlyres/7CD97110-B285-4694-BD2B-0313F85E78E7/42983/Climate_Change_Implications.pdf; see NETT, *supra* note 23.

²⁵ See *infra* Part II.

II. AUSTRALIA ENACTED PART IIIA OF THE TRADE PRACTICES ACT TO GUARD AGAINST MONOPOLY AS IT PRIVATIZED CRITICAL INFRASTRUCTURE

Australia enacted Part IIIA, its primary third-party access law, as one of many reforms intended to foster competition in the Australian economy.²⁶ Part IIIA regulates services provided via essential pieces of infrastructure.²⁷ If a service meets the statutory criteria established by Part IIIA, the service provider becomes subject to the regulator's determination of whether access should be granted and on what terms.²⁸ An airport is a classic example of essential infrastructure. In that context, access would be granted to the services provided by the airport—use of runways, taxiways and other airport facilities.²⁹ If the service provider and access seeker cannot agree on mutually agreeable terms arbitration will commence and terms will be imposed by regulators.³⁰

A. *Australia Liberalized Trade and Privatized State-Owned Enterprises, Sparking Fears of Private Monopolies*

Over the last twenty years, Australia has moved away from relying on government-run companies to supply services toward a more laissez faire approach characterized by private companies operating in a competitive market. Historically, government ownership of commercial, financial, and industrial enterprises was a major feature of the Australian economy.³¹ Australian governments at the state and federal level owned and controlled the major part of the telecommunications, electricity, airports, gas production, banking, and railways industries.³²

When the Labour Party took power in 1983, it bowed to public pressure by introducing measures to liberalize Australia's economy.³³ Australia floated its currency, deregulated its financial markets,³⁴ and substantially reduced external tariffs.³⁵ Gains from these liberalization

²⁶ MILLER, *supra* note 15, at 185.

²⁷ *Id.* at 183-84.

²⁸ Trade Practices Act, 1974, Pt. IIIA, §§ 44H, 44S (Austl.).

²⁹ *See infra* Part II(A).

³⁰ *See* Trade Practices Act, 1974, Pt. IIIA, § 44V (Austl.).

³¹ R. C. MASCARENHAS, *GOVERNMENT AND THE ECONOMY IN AUSTRALIA AND NEW ZEALAND: THE POLITICS OF ECONOMIC POLICY MAKING* 263 (1996).

³² *Id.* at 271.

³³ *Id.* at 67-70, 269.

³⁴ National Competition Council, *Overview of National Competition Policy*, <http://www.ncc.gov.au/articleZone.asp?articleZoneID=16> (last visited Dec. 27, 2007).

³⁵ STEPHEN BELL & BRIAN HEAD, *STATE, ECONOMY, AND PUBLIC POLICY IN AUSTRALIA* 235 (1994).

measures of the 1980s in Australia fueled the privatization and competitive reform efforts of the 1990s.³⁶ From 1990 to 1997, sales of public assets in Australia totaled about 61 billion AUD, half of those at the federal level.³⁷

Privatization generated anxiety that the now private owners of unique infrastructure would operate as monopolists.³⁸ Under government control, the facilities and infrastructure had been managed partially as instruments of social welfare with services provided equitably.³⁹ Critics feared that after privatization, service providers would try to maximize profits and that, ultimately, consumers would suffer.⁴⁰

In 1992, a coalition of Australian governments formed a commission to consider the possibility of a national competition policy.⁴¹ Frederick Hilmer was appointed its chair. He and his colleagues authored a report (“Hilmer Report”), which recommended a program of competitive reforms for Australia.⁴² The Hilmer Report argued that Australia needed to create a legal regime to establish access rights to “essential facilities.”⁴³ The “essential facilities” contemplated in the Hilmer Report were those that could not be economically duplicated.⁴⁴ Third-party access rights were envisioned as a way to promote competition in markets for services that relied upon these essential facilities.⁴⁵

A review of a recent case brought under Part IIIA will give shape to the concept of an essential facility. In *Re Virgin Blue Airlines*, (“*Virgin Blue*”) the airline sought declaration and access to Sydney International Airport.⁴⁶ Virgin Blue sought the right to use the airport facilities so that it could provide air travel for domestic passengers.⁴⁷ To provide such services, the airline required access to the runways, taxiways, parking aprons, and terminals at Sydney International.⁴⁸

³⁶ MASCARENHAS, *supra* note 31, at 67-70, 270-71.

³⁷ Reserve Bank of Australia, *Bulletin: Privatisation in Australia*, 7 (Dec. 1997), available at http://www.rba.gov.au/PublicationsAndResearch/Bulletin/bu_dec97/bu_1297_2.pdf.

³⁸ See FREDERICK G. HILMER, NATIONAL COMPETITION POLICY: REPORT BY THE INDEPENDENT COMMITTEE OF INQUIRY xxx-xxxv (Australian Government Publishing Service 1993).

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ National Competition Council, *supra* note 34.

⁴² HILMER, *supra* note 38, at xxi-xxxv.

⁴³ *Id.* at 239-68.

⁴⁴ *Id.* at 239.

⁴⁵ *Id.*

⁴⁶ *Re Virgin Blue Airlines Pty Ltd.* (2005) Austl. Competition Tribunal 5, available at <http://www.austlii.edu.au/au/cases/cth/ACompT/2005/5.html>.

⁴⁷ *Id.* ¶ 4.

⁴⁸ *Id.* ¶ 8.

The Sydney International Airport qualifies as an “essential facility” because it is the major airport serving Sydney. It would be difficult and expensive to build an airport to compete with Sydney International. More importantly, it would be socially inefficient to build another airport when Sydney International can meet demand for air travel. Naturally, any airline that wants to provide air travel to and from Sydney must have access to the airport. In *Virgin Blue*, the Australian Competition Tribunal (“ACT”) ultimately required the airport to provide access to Virgin under the provisions of Part IIIA.⁴⁹

The *Virgin Blue* case demonstrates the role that third-party access law can have in enabling competition.⁵⁰ In the absence of rights for third parties to gain access to infrastructure, the owner of a critical piece of infrastructure has the opportunity to act as a monopolist and set monopoly prices. The immediate effect of inflated pricing is that consumers will pay more for the service in question than they would if multiple competing airports supplied the market.⁵¹ Such anti-competitive effects are not limited to the market for airport services, however. In *Virgin Blue*, the ACT declared the airport services and granted access to Virgin in order to promote competition in the market for air travel.⁵² In the absence of effective third-party access law, the owner of an “essential facility” can stifle competition in related markets that depends on access to deliver services. Without access to the runways, taxiways, parking aprons, and airport terminals at Sydney International, Virgin was unable to compete with other airlines in the market for air travel services.⁵³

B. Part IIIA of the TPA Ensures Competition Where Monopolies Exist

In 1995, amidst widespread privatization of infrastructure, the Commonwealth enacted Part IIIA of the TPA.⁵⁴ Part IIIA acts as the default third-party access law for Australia and applies *unless* supplanted by a more specific industry access code.⁵⁵

The ACT has explained that Part IIIA operates on the assumption that “competition, efficiency and public interest are increased by overriding the exclusive rights of the owners of ‘monopoly’ facilities to determine the

⁴⁹ *Id.* ¶ 25.

⁵⁰ *Id.* ¶¶ 1-25.

⁵¹ This conclusion flows from basic economic theory regarding price setting in monopolistic versus competitive markets.

⁵² See *Virgin Blue Airlines*, *supra* note 46, ¶ 20.

⁵³ *Id.* ¶¶ 19-25.

⁵⁴ Competition Policy Reform Act, 1995, § 59 (Austl.).

⁵⁵ Trade Practices Act of 1974, Pt. IIIA, § 44G (Austl.).

terms and conditions on which they will supply their services.”⁵⁶ Part IIIA focuses on facilities “of national significance that it would be uneconomic to duplicate or replicate and that supply a service, access to which would promote competition.”⁵⁷ In 2006, the Parliament clarified Part IIIA’s objectives: Part IIIA is intended to “promote the economically efficient . . . use of and investment in infrastructure . . . thereby promoting effective competition in upstream and downstream markets.”⁵⁸ Part IIIA also establishes a “framework . . . to encourage a consistent approach to access regulation in each industry.”⁵⁹

Part IIIA establishes three separate mechanisms to regulate third-party access. First, an individual facility may be “declared” and thereby subjected to the third-party access rights set forth in Part IIIA.⁶⁰

Second, states may author their own access regimes.⁶¹ This process begins with a state submitting its regime to the National Competition Council (“NCC”), which then offers its recommendation as to certification of a state regime.⁶² The relevant government minister⁶³ receives that recommendation and then makes the ultimate decision to certify the state’s regime as “effective.”⁶⁴ If the minister does certify it, the regime becomes the controlling access regime for its subject matter within that jurisdiction.⁶⁵ Multiple states may also enact and seek certification of identical regimes to create multi-jurisdictional access regimes.⁶⁶ In 1997, for example, the states passed identical laws to establish the National Third-Party Access Code for Natural Gas Pipeline Systems (“Gas Code”), which created a nationwide access regime for natural gas pipelines.⁶⁷

Third, facility owners may propose their own third-party access arrangement by submitting an application to the Australian Competition and

⁵⁶ Re Australian Union of Students (1997) 147 A.L.R. 458, ¶ 28.

⁵⁷ *Id.*

⁵⁸ Trade Practices Act, 1974, Pt. IIIA, § 44AA (Austl.).

⁵⁹ *Id.*

⁶⁰ MILLER, *supra* note 15, at 187.

⁶¹ *Id.* at 190-91.

⁶² Trade Practices Act, 1974, Pt. IIIA, § 44M (Austl.).

⁶³ NATIONAL COMPETITION COUNCIL, THE NATIONAL ACCESS REGIME: A GUIDE TO PART IIIA OF THE TRADE PRACTICES ACT OF 1974 PART B, 8 (2002), available at <http://www.ncc.gov.au/pdf/DEGeGu-002a.pdf>. Normally, this will be a Commonwealth minister, usually a treasury official, but where the service in controversy is provided by a state government, that state’s chief minister will make the determination.

⁶⁴ Trade Practices Act, 1974, Pt. IIIA, §§ 44M, 44N (Austl.).

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ National Access Code for Natural Gas Pipeline Systems (1997), available at <http://www.coderegistrar.sa.gov.au/code.htm>.

Consumer Commission (“ACCC”).⁶⁸ This Comment does not explicitly consider the implications of owner-proposed access arrangements for the CCS industry. Access arrangements must be approved by largely the same criteria as if they were reached by the declaration process.⁶⁹ Also, the terms of such access arrangements must accord with the same pricing principles as those that would be set by regulators via the declaration process.⁷⁰ The net result is that a service provider does not have any real incentive to commit to terms preemptively in an access arrangement when the possibility exists that the service will never be declared. As a result, the declaration process provides the real incentive to act or not. For this reason, this Comment focuses on the first two mechanisms available under Part IIIA: declaration and certification. This Comment considers each of these two mechanisms in turn, demonstrating that applying either to CCS would deter investment.

III. LARGE AND UNIQUE PIECES OF CCS INFRASTRUCTURE WILL MEET THE CRITERIA FOR “DECLARATION” UNDER PART IIIA OF THE TPA

Part IIIA can only be used to obtain third-party access where the service and corresponding facility meet six statutory criteria.⁷¹ Taken as a whole, these criteria for “declaration” are too amorphous to provide sufficient certainty for private investors embarking on CCS infrastructure projects.⁷² Because declaration may have serious consequences for how a service provider operates, the prospect of declaration makes it difficult to predict costs and revenues. One important relationship, however, does surface: the larger the infrastructure, the more likely it will meet the statutory criteria for declaration. Specifically, pipelines and sequestration sites will be more likely candidates than capture facilities.⁷³

A. *Declaration Is the Basic Mechanism for Allowing Third-Party Access*

The default mechanism for regulating third-party access under Part IIIA is by “declaration.” “Declaration” grants a third party the right to negotiate with the service provider to set the terms of access to the service.⁷⁴

⁶⁸ MILLER, *supra* note 15, at 191.

⁶⁹ Trade Practices Act, 1974, Pt. IIIA, § 44ZZA (Austl.)

⁷⁰ *Id.* § 44ZZA(3)(ab).

⁷¹ *Id.* § 44G.

⁷² *See infra* Part III.

⁷³ *See infra* Part III.C.

⁷⁴ NATIONAL COMPETITION COUNCIL, THE NATIONAL ACCESS REGIME: A GUIDE TO PART IIIA OF THE TRADE PRACTICES ACT 1974 PART A 9 (2002), available at <http://www.ncc.gov.au/pdf/DEGeGu-001a.pdf>. It is worth mentioning that access may be granted under other laws. For example, under § 46 of the Trade Practices Act courts may grant access, but only with a showing of intentional abuse of market

A “service” for the purposes of Part IIIA means: any service provided by means of a facility, including the use of infrastructure, the handling or transportation of goods or people, and communications infrastructure.⁷⁵ Part IIIA offers no definition of facility, but the courts have made clear that the term requires some physical asset.⁷⁶ For example, in *Re Sydney International Airport*, (“*Sydney International*”) the ACT “declared” freight handling services, and it identified the entire Sydney Airport as the facility attached to those services.⁷⁷

The process of declaration has two steps. First, an application is made to the NCC.⁷⁸ The NCC reviews the application and makes a recommendation.⁷⁹ The appropriate Minister takes the application along with the NCC’s recommendation, reviews it and makes the final decision whether to “declare” the service and subject it to the third-party access requirements of Part IIIA.⁸⁰ The ACT hears appeals of declaration decisions⁸¹ and issues binding rulings.⁸²

Once the appropriate Minister declares a service, the owner of that service has two options. Either it can reach a mutually satisfactory agreement with the access seeker or it can submit to a binding arbitration presided over by the ACCC.⁸³ Under the second scenario, the ACCC’s arbitration decision dictates the terms of access for the service.⁸⁴ If the owner can show that an access arrangement is infeasible, the ACCC may not require access.⁸⁵

power. Part IIIA allows for access without proving anti-competitive behavior has taken place. *See* Trade Practices Act, 1974, § 46 (Austl.).

⁷⁵ MILLER, *supra* note 15, at 189.

⁷⁶ *Id.* at 191.

⁷⁷ *Re Sydney International Airport* (2000) Austl. Competition Tribunal 1, ¶ 1, *available at* <http://www.austlii.edu.au/au/cases/cth/ACompT/2000/1.html>.

⁷⁸ MILLER, *supra* note 15, at 199-200.

⁷⁹ *Id.*

⁸⁰ *Id.* at 187.

⁸¹ Trade Practices Act, 1974, Pt. IIIA, §§ 44K, 44L (Austl.).

⁸² *See id.*

⁸³ *See id.* § 44S.

⁸⁴ *See id.* § 44V.

⁸⁵ *Id.* § 44V.

B. *The Six Declaration Criteria Under Part IIIA Are Too Ambiguous to Allow Investors to Determine in Advance Whether a Piece of Infrastructure Will Be Declared*

Both the NCC and the relevant Minister evaluate the application for declaration based on six criteria intended to ensure that granting access will actually provide a net competitive benefit.⁸⁶ These criteria are:

- (1) Access to the service must materially promote competition in at least one market other than the market for the service;
- (2) It must be “uneconomical” to develop another facility to provide the service;
- (3) The facility must be of national significance either with regard to its size, its importance to commerce, or its importance to the national economy;
- (4) The requested access must not pose an undue risk to human health or safety;
- (5) Access to the service must not already be covered by another effective access regime; and
- (6) The requested access must not be contrary to the public interest.⁸⁷

The ambiguity of these six criteria creates a real problem for an investor trying to predict whether a project will meet them. To put the problem differently, the criteria are so broad that they seem to give regulators applying them a great deal of discretion.

Before examining these criteria in greater depth, it is important to identify and describe the CCS services and facilities that could be subject to declaration under Part IIIA. CCS projects have three phases, each of which will likely be considered a separate service for the purposes of Part IIIA. The CCS process begins with capturing the carbon dioxide from a large point-source emitter.⁸⁸ A gas processing facility will be required to separate carbon dioxide from water and the other flue gases.⁸⁹ The second phase of CCS, and second potential service will be the transportation of carbon

⁸⁶ *Id.* §§ 44G, 44H.

⁸⁷ *Id.* § 44G. These six criteria are paraphrased here, but the essential language remains unchanged.

⁸⁸ IPCC Report, *supra* note 2, at 19.

⁸⁹ *See id.* at 24-26.

dioxide. A pipeline and supporting compression facilities are necessary to transmit the carbon dioxide under pressure.⁹⁰ The third phase of CCS will be geo-sequestration services. A number of facilities, including an injection facility, monitoring equipment, and the actual subterranean storage site are essential to supply this service.⁹¹ For each of the three phases of CCS, there will be a service and related facilities that may be subjected to Part IIIA requirements.

1. If CCS Facilities Operate as Natural Monopolies, Then Increased Access Would “Promote Competition,” and Declaration Will Be More Likely

To satisfy the first criterion for declaration under Part IIIA, granting access to the service must “promote competition” in a market other than the one for the service.⁹² The ACT begins this analysis by defining relevant markets.⁹³ In *Duke Eastern Gas Pipeline Pty Ltd*, (“*Duke Gas*”) the ACT defined the market in question as transmission of natural gas.⁹⁴ Gas exploration, production, processing, distribution, and sales were all related but as distinct markets.⁹⁵ By analogy, given the functional similarity between CCS and natural gas transmission, each stage of the CCS process likely would qualify as a separate market under the first criterion.

Increased third-party access will only promote competition if the firm that controls the facility exercises a large degree of market power within the market being examined.⁹⁶ Two factors determine a firm’s market power: the degree of control of the market and the susceptibility of the service to substitution.⁹⁷ The more of the market a single firm controls, the more market power it has. The fewer substitutes there are for a service, the more market power the service provider has.

⁹⁰ *Id.* at 29-31. Other means of transportation are possible, but pipelines represent the lowest cost option assuming a significant volume of carbon dioxide.

⁹¹ *Id.* at 31-35.

⁹² Trade Practices Act, 1974, Pt. IIIA, § 44G(2)(a) (Austl.).

⁹³ MILLER, *supra* note 15, at 203.

⁹⁴ *Re Duke Eastern Gas Pipeline Pty Ltd* (2001) Austl. Competition Tribunal 2, ¶ 77, available at <http://www.austlii.edu.au/au/cases/cth/ACompT/2001/2.html> [hereinafter *Duke*].

⁹⁵ *Id.*

⁹⁶ See MILLER, *supra* note 15, at 203.

⁹⁷ See *Specialized Container Transport Application for Declaration of a Rail Service Provided by Rail Access Corporation: Reasons for Decision*, National Competition Council, 10-13 (June 16, 1997), available at <http://www.ncc.gov.au/pdf/DERaSnsRe-001a.pdf> [hereinafter *Specialized*] (pointing out that the state-owned rail transport company owned the only track for the line in question, and, that air, sea, and road transport were poor substitutes for rail transport).

For example, in *Re Specialised Container Transport*, (“*Specialised Transport*”) the NCC recommended declaration of the freight services provided by a railway linking Broken Hill with Sydney.⁹⁸ The NCC concluded that the Rail Access Corporation (“RAC”) had the requisite market power on two grounds.⁹⁹ First, RAC wholly owned all rail lines in New South Wales (demonstrating a high degree of market control).¹⁰⁰ Second, the NCC determined that the alternative modes of freight—air, sea, and road—were poor substitutes for rail freight and, therefore, were not direct competitors (low susceptibility to substitution).¹⁰¹ By contrast, in *Duke Gas*, the ACCC decided that competition would not be promoted, in large part, because other pipeline routes were available to move gas to the market in question.¹⁰² In essence, Duke did not have a large enough share of market power to qualify its pipeline for declaration under the first criterion.

The logic of the *Duke Gas* decision suggests that increased access to certain CCS services would likely promote competition in related markets.¹⁰³ First, a firm’s ability to compete in any of the three CCS service markets depends upon its access to the other related upstream and downstream markets. A firm will not be able to provide carbon dioxide separation services unless it can guarantee access to a pipeline and sequestration site. As a result, CCS service providers in one market will have a strong case for access to the services and infrastructure of a related CCS service provider.

Second, CCS firms may have significant market power. The investment costs associated with CCS infrastructure will be large and will raise a serious barrier to market entry. Pipelines are expensive to build, as are wells to drill. Competition will also depend upon the availability of high quality storage sites in proximity to urban areas.¹⁰⁴ If few good sequestration sites exist, then competition in that market will be necessarily limited. Over the near term, demand for CCS services will also be quite limited. As a result of this, and the fact that CCS infrastructure will require a large amount of capital, a single provider will tend to dominate early on.

⁹⁸ *Id.* at 2.

⁹⁹ *See id.*

¹⁰⁰ *Id.* at 3.

¹⁰¹ *Id.* at 10-12.

¹⁰² *Duke*, *supra* note 94, ¶¶ 117-20.

¹⁰³ *See* IPCC Report, *supra* note 2, at 19-29; *Duke*, *supra* note 94, ¶¶ 76-80, 117-20.

¹⁰⁴ *See generally* JOHN BRADSHAW & TESS DANCE, MAPPING GEOLOGICAL STORAGE PROSPECTIVITY OF CO₂ FOR THE WORLD’S SEDIMENTARY BASINS AND REGIONAL SOURCE TO SINK MATCHING, Greenhouse Gas Technologies Cooperative Research CO₂CRCC & Geoscience Australia (2004), available at http://www.co2crc.com.au/PUBFILES/STOR0405/GHGT7_Bradshaw_potentialworldsedbasins.pdf (matching probable sequestration sites with emission sources).

Market power also depends on whether the service can be substituted by another competing service.¹⁰⁵ CCS will likely be relatively immune to substitution because no other process takes carbon dioxide from a point-source and permanently disposes of it. Terrestrial carbon sequestration provides another means of trapping carbon dioxide, but because it absorbs ambient carbon dioxide and does not have the same guarantees of permanence, it is not a perfect substitute.¹⁰⁶ Market power will also depend upon the availability of alternative services within the CCS industry.¹⁰⁷ For example, pipeline operators may have to compete with freight companies to provide carbon dioxide transportation services.¹⁰⁸ But, given that pipeline transport is the lowest cost option, there will likely be few competitive substitutes in that market.¹⁰⁹

Under the first criterion, CCS services may be good candidates for declaration. First, the three markets for CCS services will be closely-tied; service providers in one market will depend upon access to the other connected markets to compete. Second, because CCS services will be costly to provide, it will be common for markets to be served by a single provider. As CCS develops and more participants enter CCS markets, market power will tend to decline, and these conclusions may not hold. As a result, the application of the first criterion depends on the time frame considered.

2. *CCS Infrastructure Will Likely Be “Uneconomical” to Duplicate*

The second criterion for declaration requires that the facility related to the service be “uneconomical” to duplicate.¹¹⁰ The NCC and ACT have discussed and attempted to clarify this facially ambiguous standard. In *Sydney International*, the ACT explained that the “uneconomical to duplicate test should be construed in terms of the associated costs and benefits of development for society as a whole.”¹¹¹ In *Duke Gas*, the ACT accepted NCC’s proposal that where a single facility can satisfy market demand at a lower cost than multiple facilities, it would be uneconomical to

¹⁰⁵ See *Duke*, *supra* note 94, ¶¶ 116-24.

¹⁰⁶ GLOBAL CLIMATE CHANGE AND U.S. LAW 693-94 (Michael B. Gerrard, ed., 2007).

¹⁰⁷ This conclusion follows from the basic economic theory that a seller has little ability to set the price of a good if a buyer has readily available alternatives to the seller’s product.

¹⁰⁸ See IPCC Report, *supra* note 2, at 181.

¹⁰⁹ *Id.* at 190-91.

¹¹⁰ Trade Practices Act, 1974, Pt. IIIA, § 44G (Austl.).

¹¹¹ *Sydney*, *supra* note 77, ¶ 204.

duplicate that facility.¹¹² This concept of a socially efficient single provider is captured by the term “natural monopoly.”¹¹³

Applying the uneconomical to duplicate criterion to the CCS context requires some speculation about the character of the market for geo-sequestering carbon dioxide. However, even without certainty of what carbon regulations will look like, useful comparisons can be drawn among the different types of CCS facilities. Technical literature seems to assume that individual carbon capture facilities would attach to each large carbon dioxide emitter.¹¹⁴ Attaching capture facilities to emitters avoids the problem of having to transport the raw flue gas, which only contains between 3% and 12% carbon dioxide.¹¹⁵ As a result, capture infrastructure will not qualify for declaration under the second criterion.

CCS pipelines are expensive to construct costing around \$1 million U.S. dollars per meter in diameter, per kilometer.¹¹⁶ The cost of transmitting carbon dioxide calculated per unit of gas descends as the quantity of gas transmitted increases.¹¹⁷ This means that, all other things being equal, a large pipeline moves gas less expensively than two smaller pipelines. However, the size of a given CCS pipeline will also be a function of the size of the storage sites available for sequestration. Widely-dispersed smaller storage sites will necessitate multiple smaller pipelines. Clustered storage sites, or the existence of only one large viable storage site, would both tend to favor a single larger pipeline.¹¹⁸ Of course, the potential for multiple CCS pipelines presupposes a longer timeframe and a robust demand for transmission services. Over the near term, because demand will be low, and the economies of scale are large, a market will almost certainly be most efficiently served by a single pipeline.

It is unclear whether underground storage sites appropriate for CCS will exhibit the characteristics of a natural monopoly. A variety of different geologic formations seem appropriate for CCS so that multiple viable

¹¹² *Duke*, *supra* note 94, ¶ 64.

¹¹³ HILMER, *supra* note 38, at 239.

¹¹⁴ See, e.g., IPCC Report, *supra* note 2, at 108.

¹¹⁵ U.S. Department of Energy, Carbon Capture Research, <http://www.fossil.energy.gov/programs/sequestration/capture/> (last visited Feb. 15, 2008).

¹¹⁶ See IPCC Report, *supra* note 2, at 190-91 (extrapolating from graph showing relationship of cost of transport to diameter of pipeline).

¹¹⁷ *Id.* at 191.

¹¹⁸ *Id.* at 181-92. This discussion flows logically from the fact that cost of gas transmission declines as the width of a pipeline increases. Only where the available sequestration sites limit the pipe width will multiple pipelines become more probable.

options should exist in a reasonable proximity to emissions sources.¹¹⁹ However, the availability of alternative sites does not mean that using multiple sites will be efficient. If a CCS pipeline qualifies as a natural monopoly, then it will also be most efficient to sequester carbon dioxide at a single location.¹²⁰ A single storage location does not necessarily imply a single storage site. The property interests in subterranean storage capacity at a particular location may be divided among various property owners so that multiple injection wells operated by different companies is conceivable.¹²¹ More likely though, the property interest will be held by a single entity¹²² and the allocation of property rights to storage capacity will only reinforce the tendency for geo-sequestration facilities to behave as natural monopolies in a given CCS market.

3. *Larger CCS Infrastructure May Be “Nationally Significant”*

Under the third criterion, a facility cannot be declared unless it is of “national significance” in either size, importance to commerce, or general importance to the national economy.¹²³ Historically, this criterion has had a relatively straightforward application. Large, unique pieces of infrastructure like airports¹²⁴ and railways¹²⁵ have qualified easily. The most important element of the “national significance” criterion in the CCS context is the question of importance to commerce. In *Re Australian Union of Students*, the ACT refused to declare access to a computer network because the theoretical economic benefit was negligible as a contribution to Australia’s

¹¹⁹ See *id.* at 94-96, 197 (mapping the relationship between sources of carbon dioxide and likely storage basins; discussing the various geologic formations appropriate for sequestration).

¹²⁰ See *id.* at 42, 259-63. This conclusion follows to the extent pipelines are significantly more expensive than sequestration rights and the associated facilities.

¹²¹ See Australian Bureau of Statistics, 7113.0 - Agriculture, Australia, 1999-2000, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/PrimaryMainFeatures/7113.0?OpenDocument> (last visited Jan. 1, 2008). Most rural land in Australia is held in large tracts by either the government or its lessees, and, therefore, subterranean interests are likely to be unified rather than divided among many property owners. This conclusion is drawn loosely from the fact that 59% of land (456,000,000 hectares) in Australia is used for agriculture, and that land is operated by about 102,500 businesses, so that average land per agricultural business is equal to roughly 4450 hectares, or 17.2 square miles. See MINTER ELLISON, CARBON CAPTURE AND STORAGE: REPORT TO THE AUSTRALIAN GREENHOUSE OFFICE ON PROPERTY RIGHTS AND ASSOCIATED LIABILITY 66-70 (2005), available at <http://www.climatechange.gov.au/ccs/publications/pubs/ccs.pdf>. This conclusion also assumes that the property interest in subterranean sequestration capacity will be joined to the surface interest.

¹²² See Australian Bureau of Statistics, 7113.0 - Agriculture, Australia, 1999-2000, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/PrimaryMainFeatures/7113.0?OpenDocument> (last visited Jan. 1, 2008). This supposition follows very generally from the fact that agricultural parcels in Australia are quite large and that sequestration sites are more likely to be located in undeveloped areas.

¹²³ Trade Practices Act, 1974, Pt. IIIA, § 44H (Austl.).

¹²⁴ *Sydney*, *supra* note 77, ¶ 4.

¹²⁵ MILLER, *supra* note 15, at 207.

national economy.¹²⁶ CCS facilities are unlikely to be of national economic importance in the sense of industry earnings, at least initially.

CCS facilities may meet the national significance standard as a means to mitigate climate change. In *Specialised Transport*, the NCC considered the strategic importance of a rail line used for transporting grain, coal, and steel against the background of the commercial importance of those industries.¹²⁷ Similarly, one could argue that CCS enables the continued viability of energy generation from fossil fuels, which would by extension make CCS infrastructure nationally important. Or, if a court reasons that climate change has a negative impact on Australia's economy, then infrastructure playing a role in mitigating climate change may be nationally significant. The application of this criterion depends upon the interpretation a particular regulator gives to national significance.

4. Access to CCS Infrastructure Will Not Pose Unusual Safety Risks

Under the fourth criterion, access to a service cannot be declared if doing so would pose an undue risk to human health or safety.¹²⁸ This criterion focuses on whether new operators would pose some novel risk to safety. In *Sydney International*, the NCC was unconvinced that a small freight handler would, simply as a function of its size, be less safe than existing handlers.¹²⁹ In *Specialised Transport*, the NCC reasoned that existing regulations governing the rail transport would suffice to ensure that the access seeker would operate safely.¹³⁰ Because access to CCS infrastructure will simply amount to either transmitting or sequestering carbon dioxide, there is no reason to think that access will pose safety risks so long as the infrastructure has unused capacity to sell.

Under the fifth criterion, the Minister may not declare a service under Part IIIA if another "effective" access regime already regulates the service.¹³¹ This criterion observes the states' right to create their own access regimes. No such regime exists or has been proposed for CCS.

¹²⁶ Brenda Marshall & Rachael Mulheron, *Access to "Essential Facilities" Under Part IIIA of the Trade Practices Act: Implementing the Legislative Regime*, 10(1) BOND L. REV. 99, ¶¶ 33-36 (1998), available at <http://www.austlii.edu.au/au/journals/BondLRev/1998/6.html>.

¹²⁷ *Specialized*, *supra* note 97, at 23.

¹²⁸ Trade Practices Act, 1974, Pt. IIIA, § 44H(4) (Austl.).

¹²⁹ *Sydney*, *supra* note 77, ¶¶ 209-14.

¹³⁰ *Specialized*, *supra* note 97, at 24.

¹³¹ Trade Practices Act, 1974, Pt. IIIA, § 44H (Austl.).

5. *Declaration of CCS Infrastructure May Be in the “Public’s Interest”*

Finally, Part IIIA requires that declaring the service will not be contrary to the “public interest.”¹³² In its recommendations, the NCC mentions a number of factors that it considers when determining whether access serves the public interest.¹³³ Many of these seem to bleed into the other five criteria; for example, the NCC will consider “policies” concerning “occupational health” and “the competitiveness of Australian businesses.”¹³⁴ However, the NCC has explained that the many factors captured within the public interest criterion were intended to address the “net impact of declaration on economic efficiency.”¹³⁵

In evaluating applications under this criterion, the NCC has explicitly considered a few factors that are particularly relevant to CCS. The NCC has made clear that the public has an interest in promoting ecologically sustainable development.¹³⁶ This factor strongly supports declaration of CCS services because the Australian government has identified CCS as a part of its strategy for economically sustainable development.¹³⁷ However, the NCC has also indicated that its declaration recommendations will be sensitive to the broader economic context.¹³⁸ The NCC’s guiding principles set out regional economic development as an important component of the public interest.¹³⁹ The NCC added another dimension to this component in *Re Australian Cargo Terminal Operations Pty Ltd*, where it considered whether declaration would “undermine the investment environment necessary for significant competition.”¹⁴⁰ If declaration of CCS services represents a regulatory risk, then declaration may not be in the public’s interest. These factors identify the tension within the sixth criterion. Ultimately, the determination under this criterion will be fact-based and somewhat subjective.¹⁴¹

¹³² *Id.* § 44H.

¹³³ MILLER, *supra* note 15, at 208-09.

¹³⁴ NATIONAL COMPETITION COUNCIL, *supra* note 63, at 2.

¹³⁵ *Id.* at 20.

¹³⁶ *Specialized*, *supra* note 97, at 37.

¹³⁷ National Clean Coal Initiative—Fact Sheet, Australian Labor Party, http://www.labor.com.au/download/now/national_clean_coal_initiative_factsheet_campaign_launch.pdf (last visited Dec. 27, 2007).

¹³⁸ MILLER, *supra* note 15, at 208.

¹³⁹ NATIONAL COMPETITION COUNCIL, *supra* note 63, at 21.

¹⁴⁰ MILLER, *supra* note 15, at 209.

¹⁴¹ See Brenda Marshall & Rachael Mulheron, *Declarations Under Part IIIA of the Trade Practices Act: The Case for Abolishing the Public Interest Criterion*, 15 BOND L. REV. 296 (2003) (arguing that the public interest criterion lacks any real character and simply turns on the determinations of the other criteria).

C. *Larger CCS Infrastructure Projects Will Be Better Declaration Candidates*

Applying each of the six criteria on a theoretical basis does not resolve the question of whether the CCS industry as a category will be subject to declaration under Part IIIA of the TPA. Ultimately, the individual character of a service will determine whether declaration is appropriate. Yet, the criteria draw out some general themes that are important to third-party access to CCS services and infrastructure.

First, CCS pipelines and storage sites are more likely to exhibit the characteristics of natural monopoly.¹⁴² As a result, where a single entity controls CCS transmission or sequestration, increased access to that service will likely promote competition in upstream and downstream markets. The basic characteristics of the CCS industry then raise the prospect of declaration for investors considering CCS projects.

Second, CCS as an industry raises somewhat novel questions for the national significance criterion.¹⁴³ An analysis that focuses narrowly on the size of CCS facilities and the revenues they generate may not find that CCS facilities qualify. However, to the degree that the analysis considers the role CCS plays in the broader economic context, as a process that reduces the negative impacts of burning fossil fuels, CCS facilities may be deemed nationally significant. The malleability of the third criterion makes it unclear whether CCS services and facilities will meet its requirements.

Third, Australia's "public interest" is necessarily a heterogeneous concept and eludes straightforward application. The public interest may change with political tides. For example, if the new government pursues an aggressive emissions reduction strategy, will that represent the evolving public interest? Even more troubling, the application of the public interest criterion will change depending on the timeframe considered. Imagine that one CCS pipeline exists to serve a particular urban area and that it presently meets demand for transport services. Over the near term, declaring the CCS service and subjecting the pipeline to third-party access would likely provide a net benefit to competition in related CCS service markets. Additionally, regulators would likely view declaration as a way to support ecologically sustainable development. However, forcing CCS pipeline operators to submit to access may dissuade other potential competitors from building competing pipelines. Over the long term, declaring an individual CCS service may stunt the wider development of the industry. The competing

¹⁴² See *supra* Part III.B.

¹⁴³ See *id.*

visions of the public interest incorporated within the sixth criterion make a prediction about declaration for CCS services and facilities very difficult.

The most important, albeit limited, conclusion to be drawn from the foregoing analysis is that the larger the CCS infrastructure, the more likely it is to be subject to declaration. The larger the infrastructure, the more difficult it will be to duplicate it under the second criterion. Likewise, under the national significance and public interest criteria, larger infrastructure fits the declaration criteria more easily. This result is somewhat troubling for two reasons. First, if CCS is to develop on a significant scale, large projects will be critical to establish a backbone of infrastructure. Second, to the degree that the prospect of declaration deters investment, entrepreneurs will be reluctant to embark on large CCS infrastructure projects.

Ultimately, applying the criteria to the CCS context results in a great deal of uncertainty. Part IIIA's criteria do not provide clear enough guidance for whether and when CCS services will be declared. The next Section explores one possible method to avoid this uncertainty, which is to develop an industry specific access regime for CCS. However, as the next Section makes clear, an industry regime for CCS would not eliminate uncertainty for CCS investors because of the many unknowns that still remain for the industry.

IV. THE GAS CODE PROVIDES DETAILED RULES TO GOVERN THIRD-PARTY ACCESS TO PIPELINES

The Gas Code is a prominent example of an industry specific access regime "certified" under Part IIIA. The criteria for "coverage" under the Gas Code are largely identical to the "declaration" criteria of Part IIIA.¹⁴⁴ In addition, the Gas Code requires the operators of "covered" pipelines to set terms of access and conduct their operations according to strict principles.¹⁴⁵ A similar access regime might be created for CCS to avoid some of the vagaries of Part IIIA. However, the next three Sections identify the hazards of implementing an industry specific code for CCS.

A. *State Regimes Must Be "Certified" to Supplant Part IIIA*

States may also develop their own access regimes. A regime must be certified by the appropriate Commonwealth minister to become "effective"

¹⁴⁴ National Access Code for Natural Gas Pipeline Systems (1997) at 4, available at <http://www.coderegistrar.sa.gov.au/attachments2/codeC4.pdf>.

¹⁴⁵ *Id.* at 8-9.

for purposes of Part IIIA.¹⁴⁶ If the Treasurer certifies a state's access regime, the services and facilities covered by the state regime are no longer subject to declaration under Part IIIA.¹⁴⁷ That minister may only certify a state regime if it conforms to the principles of Part IIIA.¹⁴⁸ Typically state regimes are tailored to the needs of one industry, its economics, its services, and its facilities.¹⁴⁹ By narrowing the scope of application, state access laws supply more meaningful guidance to market participants in the particular industry.

No state-based access regime has yet been proposed to govern CCS services and facilities. However, as the industry develops, a narrower approach to access regulation may have advantages. A comprehensive state-based access regime would increase predictability for potential investors. Yet, with detail comes increased compliance costs. The following Section will discuss the major features of the Gas Code to identify the costs associated with it.

B. The Contours of the Gas Code Parallel Those of Part IIIA

The Gas Code became law as part of South Australia's Gas Pipelines Access Act of 1997.¹⁵⁰ The other Australian states and the Commonwealth passed identical laws to establish a uniform national access regime. Australia enacted the Gas Code with a few primary objectives in mind. First, the Gas Code was intended to create a transparent process to facilitate third-party access to natural gas pipelines.¹⁵¹ Second, by creating such a process, the Gas Code was intended to facilitate the development of a national, integrated gas pipeline network.¹⁵² Third, the Gas Code was intended to prevent the abuse of monopoly power, promote competition within the gas market, and provide for resolution of access disputes.¹⁵³

The Gas Code only regulates access to those pipelines that have been approved for coverage.¹⁵⁴ At its inception, a large number of pipelines were

¹⁴⁶ Trade Practices Act, 1974, Pt. IIIA, § 44N (Austl.).

¹⁴⁷ *Id.* § 44G(2)(e).

¹⁴⁸ *Id.* § 44H.

¹⁴⁹ National Competition Council, Gas Code—Certification, <http://www.ncc.gov.au/> (last visited on Jan. 10, 2008) (follow "Access > Certification" on the drop-down menu under "Select NCC Activity").

¹⁵⁰ National Competition Council, Energy: Gas: National Gas Code, <http://www.ncc.gov.au/> (last visited on Jan. 28, 2008) (click on "Energy;" then click on "Gas;" then click on "National Gas Code").

¹⁵¹ National Access Code for Natural Gas Pipeline Systems (1997) at 1, available at <http://www.coderegistrar.sa.gov.au/attachments2/codeC4.pdf>.

¹⁵² *Id.*

¹⁵³ *Id.*

¹⁵⁴ *Id.*

expressly covered by the Gas Code.¹⁵⁵ New pipelines may also be added if an application meets the coverage criteria.¹⁵⁶ The Gas Code does not address access issues surrounding facilities upstream from gas pipelines. Nor does it pertain to “any tanks, reservoirs, machinery, or equipment . . . downstream of the connection point to a consumer.”¹⁵⁷ The Gas Code applies only to the transmission segment of the natural gas market.

The criteria for “coverage” under the Gas Code are largely the same as the criteria for “declaration” under Part IIIA of the TPA. Just like Part IIIA, the Gas Code requires the following: 1) coverage must promote competition in another market; 2) the pipeline must not be economical to duplicate; 3) the requested access must not compromise human health or safety, and; 4) the requested access must not be contrary to the public interest.¹⁵⁸ Under the Gas Code there is no requirement that the pipeline be of national significance. By eliminating the nebulous national significance requirement, the Gas Code puts pipeline operators on notice that regulators may permit access to any size pipeline. Defining the scope of coverage should, in theory, reduce uncertainty for service providers and allow for better investment decisions.

Once coverage has been approved under the Gas Code, the owner of the pipeline must publish an “access arrangement” setting the terms of access to the pipeline.¹⁵⁹ The access arrangement must specify the service covered, the terms and conditions governing supply of that service, and the tariffs that will be charged for the service.¹⁶⁰ The tariff or price of access under the agreement must be set at an “efficient” level that “replicates” the price of a competitive market without distorting investment decisions in related markets.¹⁶¹ The access agreement must be published along with information concerning spare pipeline capacity and the procedure for making access requests.¹⁶² The Gas Code also requires that covered pipelines be separated operationally for accounting purposes, or as it calls it, by a “ring fence” from other “related businesses” that the owner runs.¹⁶³ This “ring fencing” obligation is intended to prevent operators from giving preferential terms to related businesses.

¹⁵⁵ *Id.* at 2.

¹⁵⁶ *Id.*

¹⁵⁷ Peter Rose, *Third Party Access to Upstream Facilities*, AMPLA Yearbook 164, 179 (1999).

¹⁵⁸ Peter Slattery, *Gas Pipeline Access Regulation and New Pipeline Developments*, AMPLA Yearbook 309, 337 (2001).

¹⁵⁹ *Id.* at 330-31.

¹⁶⁰ *Id.* at 331.

¹⁶¹ *Id.* at 336.

¹⁶² *Id.* at 334.

¹⁶³ *Id.* at 330.

C. *The Gas Code Imposes a Heavy Regulatory Burden*

The Gas Code's operational and reporting obligations impose a substantial regulatory burden on pipeline operators. The ACT admits that a decision to cover a pipeline can have major commercial implications for the owner or operator of the pipeline.¹⁶⁴ In part, this is a result of the "detailed requirements as to the terms of [a]ccess [a]rrangements" and related reporting obligations.¹⁶⁵ The burden also results from the "quite detailed provisions as to how a service provider is to 'ring fence' its pipeline activities from other operations."¹⁶⁶ The benefits of more comprehensive access requirements must be evaluated in light of these increased compliance costs.

At least one company viewed the strictures of the Gas Code with such distaste that it preemptively filed an application for an undertaking under Part IIIA to avoid coverage.¹⁶⁷ In general terms, the company argued that the Gas Code effectively prohibits a company from setting prices at a level and for a duration that ensure a fair return on investment.¹⁶⁸ First, it argued that the Gas Code's "cost of service" approach to price setting did not capture the real cost of providing pipeline services. Pricing should not reflect merely the cost of providing a service, but should also consider, and, reward a service provider based on the risk inherent to the venture.¹⁶⁹ Second, the company argued that it should be allowed to set a longer pricing schedule—twenty years—than the term typically approved by regulators—five years.¹⁷⁰ Third, the company argued that it should be permitted to set prices below cost initially to attract business and above cost over the long term to recoup early losses.¹⁷¹ A recent trend of applications to revoke coverage of pipelines bears out the legitimacy of these frustrations.¹⁷²

Parts III and IV of this Comment examined two mechanisms for regulating third-party access under Part IIIA of the Trade Practices Act. Part III argued that the declaration criteria are too ambiguous to supply reliable

¹⁶⁴ *Duke*, *supra* note 94, ¶ 5.

¹⁶⁵ *Id.*

¹⁶⁶ *Id.*

¹⁶⁷ Slattery, *supra* note 158, 339 (stating now that the Gas Code has been certified, a company can no longer opt out of it in favor of Part IIIA's general provisions).

¹⁶⁸ *Id.* at 340.

¹⁶⁹ *Id.* at 339-40.

¹⁷⁰ *Id.*

¹⁷¹ *Id.* at 340.

¹⁷² National Competition Council, Gas Code—Revocation & Coverage, <http://www.ncc.gov.au/> (last visited on Jan. 10, 2008) (follow "Gas Code > Revocation & Coverage" on the drop-down menu under "Select NCC Activity").

prospective guidance for private investors considering CCS projects. Part IV reviewed the third-party access code enacted to govern natural gas pipelines to highlight the burdens associated with such an approach. Part V argues that both these approaches to third-party access regulation under Part IIIA deter investment, and that Australia should exempt CCS from Part IIIA to provide CCS investors with clear expectations *prior* to beginning a major CCS infrastructure project.

V. AUSTRALIA SHOULD EXEMPT CCS FROM PART IIIA TO INDUCE INVESTMENT

In order to foster CCS, Australia should critically evaluate the deterrence effect Part IIIA will have on investment. As an alternative to the general provisions of Part IIIA, Australia could establish an industry specific regime for CCS, but doing so would be premature and would create a significant regulatory burden. Instead, Australia should allow for some kind of exemption vehicle under Part IIIA and use it to shelter CCS.

A. *Australia Must Consider Part IIIA's Implications for Investment*

As Australia formulates its approach to third-party access for CCS, it should consider what impacts potential access regimes will have on investment in the industry. Arguably, Part IIIA will increase predictability for CCS investors by ensuring that participants in one market, like transmission, have access to other related markets, like sequestration. However, access issues only arise once infrastructure *exists*. To the extent Part IIIA dissuades investment, access issues are secondary. Australia should focus on addressing the regulatory risk associated with Part IIIA as it impacts CCS. First, the ambiguity of the declaration criteria generates uncertainty for investors considering a new infrastructure project. Second, the discretionary powers given to regulators to set access terms make it difficult for investors to gauge the likely rate of return for their projects.

B. *Creating an Industry-Specific Regime for CCS is Premature*

Part IV discussed how the Gas Code works to increase predictability for natural gas pipeline operators. First, the Gas Code applies only to a single well-defined industry.¹⁷³ Second, the Gas Code contains detailed guidance for access seekers and service providers by streamlining the

¹⁷³ See *supra* Part IV.B.

criteria for coverage, requiring pipeline operators to publish access arrangements, and by establishing detailed guidelines for setting access.¹⁷⁴

An industry specific regime for CCS could benefit the industry by avoiding the vagaries of Part IIIA and increasing predictability. For example, if CCS is of national significance as an industry, it might make sense to extend coverage to all CCS infrastructure where access would promote competition as does the Gas Code. A CCS Code could be limited in scope to the services likely to exhibit natural monopoly characteristics—pipelines and sequestration sites. Because the markets for transmission and sequestration will be closely tied, clear rules defining access rights between the two would tend to promote investment in both markets.

The problem with developing an industry-specific CCS Code is that no CCS industry yet exists. The need for access regulation is, at this point, purely speculative. The costs of CCS projects and services are relatively unknown. The future demand for CCS services depends upon when and how Australia regulates emissions. Too little is known about CCS to justify a detailed approach to access. As discussed in Section IV, the Gas Code also imposes a substantial regulatory burden on pipeline operators. While compliance costs are tolerated in industries with demonstrated profitability, such costs would be abortive for CCS.

In 2004, the Productivity Commission conducted a review of the Gas Code (“Gas Code Report”) in which it highlighted this regulatory burden and its effects on investment.¹⁷⁵ The Gas Code Report noted that the criteria for coverage under the Gas Code created the same type of regulatory uncertainty as do the declaration criteria under Part IIIA.¹⁷⁶ The Gas Code Report also reviewed scholarship in the natural gas industry in an effort to determine empirically whether the Gas Code has stunted pipeline investment. Ultimately, the authors of the Gas Code Report could not determine whether the Gas Code had depressed investment in new pipeline infrastructure.¹⁷⁷ However, they did conclude that the Gas Code was likely to distort investment away from riskier projects.¹⁷⁸ Two reasons explain why investors would be unlikely to take on riskier pipeline projects. First, regulators who set the terms of access to pipelines have no way to “distinguish between competitive pipelines that experience better than

¹⁷⁴ See *supra* Part IV.B-C.

¹⁷⁵ See PRODUCTIVITY COMMISSION, REVIEW OF THE GAS ACCESS REGIME 110, 137-40 (2005), available at http://www.pc.gov.au/__data/assets/pdf_file/0007/51586/gas2.pdf [hereinafter GAS CODE REPORT].

¹⁷⁶ *Id.* at 111.

¹⁷⁷ *Id.* at 136-38.

¹⁷⁸ *Id.* at 138.

expected outcomes and pipelines that are exerting market power.”¹⁷⁹ Second, investors believe that regulators will not award higher profits for riskier projects because they are biased in favor of consumers and access seekers.¹⁸⁰

C. The Regulatory Risk Endemic to Part IIIA Deters Investment

As demonstrated in Part III of this Comment, applying Part IIIA’s declaration criteria to the CCS industry does not produce a clear sense of whether CCS services and facilities will be subjected to its requirements. In part, this flows from the ambiguity inherent to the criteria. The national significance and public interest tests are particularly problematic. Both these criteria are somewhat subjective and may be prone to inconsistent application, either by different regulatory bodies, or because of a change in political climate.

In part, this regulatory uncertainty flows from the unknowns of the CCS industry. First, because CCS technology and methodology have not been fully commercialized, the economies of scale for the CCS industry are not yet clear. Without knowing, for instance, whether carbon dioxide separation will be a centralized service, it is hard to predict whether separation facilities will meet the declaration criteria. Second, a great deal of work remains to be done in locating good sequestration sites and determining their capacities. The availability of sites will shape the industry and determine whether CCS infrastructure will exhibit natural monopoly characteristics. If it appears that markets will tend to be served most efficiently by multiple pipelines and sequestration sites, the whole discussion of Part IIIA may be moot because the market for CCS services would likely be competitive.

In part, regulatory uncertainty results from the language and design of Part IIIA. In 2001, the Productivity Commission published a comprehensive evaluation of Part IIIA (“IIIA Report”).¹⁸¹ The IIIA Report admits the continued need for a national access regime, but also identifies a number of deficiencies in the regime that should be addressed. In the words of the Commission, “[M]ost importantly, the national access regime does not do enough to guard against the possibility that investment in essential infrastructure will be deterred.”¹⁸²

¹⁷⁹ *Id.*

¹⁸⁰ *Id.*

¹⁸¹ PRODUCTIVITY COMMISSION, REPORT ON THE NATIONAL ACCESS REGIME (2001), available at http://www.pc.gov.au/__data/assets/pdf_file/0020/18173/access.pdf [hereinafter PART IIIA REPORT].

¹⁸² *Id.* at xxi.

The IIIA Report begins by noting that the facilities contemplated by Part IIIA are large and costly.¹⁸³ Where the life of a project spans decades and the capital costs are in the many millions, any regulatory risk raises serious concerns for investors. Once the piece of infrastructure is built, the costs are sunk and must be recovered through user fees. In the context of these immense projects, the potential that Part IIIA will ultimately dictate how a service provider operates may dampen investment.¹⁸⁴

The IIIA Report also suggests that regulators tend to take the side of access seekers when they set the terms of access to services.¹⁸⁵ To induce investment, a project must promise returns in proportion to the risk involved. As the IIIA Report points out: “once a facility is operating, it will be impossible for regulators to delineate any upside returns from monopoly rent—that is, returns in excess of those necessary to justify the investment.”¹⁸⁶ In other words, what a regulator sees is a facility that makes money. The regulator does not tend to consider the alternative scenario in which the facility fails as a business venture.

D. The 2006 Amendment to Part IIIA Did Not Go Far Enough to Redress the Deterrent Effect of Part IIIA on Investment

The parliament responded to the Part IIIA Report by passing the Trade Practices Amendment (National Access Regime) Act of 2006 (“2006 Amendment”).¹⁸⁷ This amendment included a number of measures to clarify Part IIIA’s purpose and application. A new subsection, 44AA, added an “objects” clause to make as clear as possible the purpose motivating Part IIIA: “To promote the economically efficient operation of, use of and investment in infrastructure”¹⁸⁸ The 2006 Amendment also tweaked the language of the first declaration criteria to raise the threshold for declaration. The word “material” was added so that 44G now reads in relevant part: “Access . . . to the service [must] promote a *material* increase in competition.”¹⁸⁹

¹⁸³ See *id.* at xix.

¹⁸⁴ *Id.*

¹⁸⁵ *Id.*

¹⁸⁶ *Id.*

¹⁸⁷ Second Reading Speech, Trade Practices Amendment (National Access Regime) Act of 2006, available at http://parlinfoweb.aph.gov.au/piweb/view_document.aspx?TABLE=HANSARDS&ID=2308433.

¹⁸⁸ Trade Practices Act, 1974, Pt. IIIA, § 44AA (Austl.).

¹⁸⁹ *Id.* § 44G.

The 2006 Amendment also established a set of pricing principles to guide regulators in setting the terms of access.¹⁹⁰ Section 44ZZCA reads in relevant part: “[A]ccess prices should be set as to generate expected revenue . . . that is at least sufficient to meet efficient costs . . . and include a return on investment commensurate with regulatory and commercial risks involved.”¹⁹¹ It also provides that “access pricing structures should allow multi-part pricing and price discrimination when it aids efficiency.”¹⁹²

These revisions are a laudable effort to improve the workability of Part IIIA and an appropriate response to the IIIA Report. However, they also underscore the tension inherent to this type of competition law between market efficiency and social equity. The new objects clause of 44G did clarify the purpose of Part IIIA, but it did not eliminate the difficulty of applying the law in practice.

Subsection 44G mentions economic efficiency with regard to three elements: the use of, the operation of, and the investment in infrastructure. Efficiency will be defined somewhat differently when considered from each of these three perspectives. When the user reads efficient, it understands cheaper. When the operator reads efficient, it understands more expensive. When the concept of efficiency is applied to investment at the societal level it necessarily invites an inquiry into concepts of the public good. Do we mean the efficient level that allows universal access? Or, do we mean the efficient level to ensure a robust investment climate? This same tension crops up in 44ZZCA, albeit to a lesser extent. Price structures “should allow multi-part pricing and price discrimination when it aids efficiency.”¹⁹³ Again, the language begs the question: efficiency from whose point of view? In light of these tensions, it is unclear to what extent the 2006 Amendment will actually result in greater predictability for industry.

E. Part IIIA Should Be Amended to Allow Access Holidays

Though the 2006 Amendment made significant improvements, it did not adopt the Productivity Commission’s recommendations wholesale. The IIIA Report recommended that Part IIIA be amended to establish a mechanism for investors to determine the applicability of the declaration criteria before embarking on a project.¹⁹⁴ The IIIA Report argued that such

¹⁹⁰ *Id.* § 44ZZCA.

¹⁹¹ *Id.* § 44ZZCA(a).

¹⁹² *Id.* § 44ZZCA(b).

¹⁹³ *Id.*

¹⁹⁴ PART IIIA REPORT, *supra* note 181, at xxvi.

prospective rulings would allow investors to move forward with increased confidence.¹⁹⁵ Part IIIA does not provide for prospective rulings.¹⁹⁶

The IIIA Report also recommended further research into the exemption of projects from Part IIIA.¹⁹⁷ It called the case for implementing a mechanism to redress the deterrent affects of Part IIIA “compelling” and “imperative” and hoped that a scheme would be in place by 2003.¹⁹⁸ In the Productivity Commission’s view, such a change is critically important because it would generate certainty for business *prior* to making an investment.¹⁹⁹

One mechanism considered by the IIIA Report, called an “Access Holiday,” would preclude declaration of a piece of infrastructure under Part IIIA for a defined period of time. In considering the problem of regulatory risk, Gans and King demonstrate that access holidays can be a simple and effective approach to exemption where regulators cannot commit in advance to fair terms of access.²⁰⁰ Access holidays work in a way similar to patents by creating a limited period of time during which the owner has an unfettered ability to set prices as it wishes. For industries without demonstrated economics, like CCS, access holidays would eliminate regulatory risk.

F. Australia Should Exempt CCS in the Near Term to Encourage Entrepreneurial Investment

Australia should exempt CCS from Part IIIA until the industry develops to the point where it becomes clear that subjecting it to a third-party access regime would benefit society. At present, any benefits of applying third-party access law in the CCS context are speculative whereas its detriments are relatively clear. Leaving CCS exposed to Part IIIA would deter investment. Generally, the deterrent effect of Part IIIA exacerbates the uncertainties particular to CCS. More specifically, the national significance criterion of Part IIIA might deter investors from pursuing large CCS projects. If CCS is to develop on a significant scale, large projects will be essential for creating a backbone for the industry to develop around. The multifarious nature of the public interest criterion also leaves investors

¹⁹⁵ *See id.*

¹⁹⁶ *See* Trade Practices Act, 1974, Pt. IIIA (Austl.). The Trade Practices Act has no procedure for prospective rulings.

¹⁹⁷ PART IIIA REPORT, *supra* note 181, at xxvi.

¹⁹⁸ *Id.* at xxv-xxviii.

¹⁹⁹ *See id.* at xxv-xxvii.

²⁰⁰ *See* Joshua Gans & Stephen King, *Access Holidays and the Timing of Infrastructure Investment*, 80 ECON. RECORD 89, 90 (2004).

uncertain of whether a potential project will be subject to declaration. A CCS investor may well worry that a regulator's particular breed of public interest will result in a project's declaration.

The regulatory uncertainties generated by Part IIIA cannot be resolved by creating an industry specific regime for CCS. First, the character and economics of the industry are unclear so that creating a detailed access code is premature. Second, at this stage of development, CCS investment continues to be an entrepreneurial activity and as such it would not bear the regulatory burden created by a comprehensive access regime. Third, experience with the Gas Code demonstrates that even detailed access codes suffer from a degree of regulatory uncertainty that may distort investment.

The 2006 Amendment recognized, and in part redressed, the negative impact Part IIIA has on infrastructure investments, but it didn't go far enough. The addition of clear pricing principles was a boon that should ensure more favorable access terms in the future that account for investment and regulatory risks. More than likely though, investors will continue to expect, and rightly so, that regulators will underestimate such risks when they are evaluated *ex post* in light of a functioning and successful project. The objects clause also helps by stating unequivocally the purpose of Part IIIA. This addition may enhance uniformity across regulatory bodies, but that remains to be seen. Ultimately though, these measures fall short because they do not give true *ex ante* certainty to investors.

Parliament should act on the Productivity Commission's critique of Part IIIA by allowing for prospective rulings and creating some mechanism for exempting projects under Part IIIA. The simplest way to exempt CCS projects would be to grant access holidays. This approach has numerous benefits. First, it will avoid the deterrent effects on investment associated with the regulatory risk of Part IIIA. Second, it would avoid the regulatory burden associated with an industry specific access code. Third, it would signal to potential investors that the Australian government intends CCS to play an important role in mitigating climate change. Finally, access holidays would allow companies to contract with each other freely without fear that prices or terms will be imposed unexpectedly.

It is also worth pointing out that the dangers from a *laissez-faire* approach to CCS access regulation are minimal because there will be little ability for CCS operators to reap monopoly profits.²⁰¹ In the natural gas

²⁰¹ See also Trade Practices Act, 1974, Pt. IV, § 46 (Austl.). Section 46 provides a cause of action against corporations who abuse their market power for anti-competitive purposes. So, if a CCS operator did obtain "substantial" market power and an ability to set monopoly prices, section 46 would give recourse to address any anti-competitive behavior.

industry, consumers cannot easily substitute gas for another product. People need it to heat their homes, produce chemicals, generate electricity, and support manufacturing. Where only one company sells gas, it may well have substantial power to set prices because, at least in the near term, consumers have no real alternative to buying the gas. By contrast, in the context of CCS, government regulation will set the price of emitting carbon dioxide. The level of the Australian carbon cap will establish the practical ceiling for prices in the CCS service markets. Emitters will always face a choice between emitting carbon dioxide and paying the associated penalty, and paying the CCS service provider its fee. As a result, CCS service providers will have little ability to leverage market power above the government determined emission price.

VI. CONCLUSION

This Comment has considered how Part IIIA of the Trade Practices Act will impact the nascent CCS industry. Although some markets for CCS services will exhibit characteristics of natural monopoly, leaving CCS exposed to Part IIIA is unwise. Part IIIA creates regulatory uncertainty and would deter investment in CCS infrastructure. An industry specific code might reduce uncertainty, but the CCS industry has not developed enough to permit such an approach. If Australia wants to induce investment in the area, it should exempt CCS from Part IIIA. This approach avoids the regulatory risks and burdens associated with Part IIIA and would allow CCS to develop organically.