

Scope for customer involvement in transmission planning decisions in Australia

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Outline

1. Introduction
2. Transmission concerns in Australia
3. Potential for customer involvement to address these problems
4. Evidence from UK: Lighthouses and Airports
5. Evidence from Argentina: Public Contest method in electricity transmission
6. Evidence from Chile: transmission expansion
7. The concept and practice of negotiated settlements
8. Evidence from US: negotiated settlements for gas pipelines at FERC
9. Further evidence from US: negotiated settlements (stipulations) in Florida
10. Evidence from Canada: negotiated settlements for oil and gas pipelines
11. Summary and implications of international experience
12. Adapting these ideas for electricity transmission in Australia.

1. Introduction

The Energy Reform and Implementation Group (ERIG) has raised the question whether electricity transmission arrangements in Australia are as efficient and satisfactory as they might be. Firecone has been asked to report on National Planning Arrangements and Governance Options.

In a number of other countries and other sectors, governance options include regulatory arrangements that significantly involve utility customers in regulatory decisions. Firecone has asked me to describe such arrangements and to indicate how these might be applied in transmission planning decisions in Australia.

The next two sections briefly note some concerns about present transmission arrangements in Australia and suggest how significant involvement of customers could help to address these concerns. The main body of this paper describes arrangements that apply in a variety of other sectors and countries. The final two sections summarise this experience and suggest some possible ways of applying these ideas in the governance of the transmission sector in Australia.

2. Transmission concerns in Australia

A variety of different transmission arrangements exist in Australia, and a variety of different views has been expressed about these arrangements. Perhaps transmission entities seem relatively satisfied with the present situation, but customers of the transmission system (including generators and major users) seem less convinced.

I understand that among the main concerns cited are the following:

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- co-ordination problems, including between transmission organizations in different states, not fully met by present co-ordination mechanisms (ANTS, IRPC, APRs);
- transmission investments crowding-out generation investments in certain states (e.g. NSW, QLD and TAS) particularly by virtue of integration between generation and transmission organizations in these states;
- greater spending by government-owned TNSPs in the absence of regulatory constraint, as evidenced by the relatively high level of capex and opex by government-owned TNSPs; and
- at some times, concerns by large users about potentially inadequate transmission interconnections.

3. Potential for customer involvement to address these problems

Many of these concerns seem to reflect a perception that transmission investment decisions are predominantly determined by transmission entities and/or by planning organisations that may have limited information and undue concern for their own interests, and insufficient awareness of or concern for the interests of the customers of the transmission systems.

Customers of a transmission system potentially include generating stations that need to convey power to markets; suppliers and large and small customers that need to procure power from generation sources; and distribution companies whose investment programmes may be impacted by transmission. They may also include interconnectors, generating stations, transmission companies and all the above types of customers in one state whose interests may be affected by a particular transmission investment (or lack of it) in another state. Precisely how Australian transmission customers are best defined for operational purposes is a matter for further consideration.

In general terms, the proposal in this paper is that more effective involvement of customers in transmission investment decisions could help to address the concerns mentioned above. Specifically,

- customers adversely affected by a proposed transmission investment (or lack of it) would have an interest in bringing this to the attention of the proponents and suggesting an alternative approach;
- generator customers that would be adversely affected by a proposed transmission investment could argue against it;
- customers of all kinds that considered that unnecessary (or unnecessarily expensive) transmission investments were being proposed would be able to oppose them; and
- customers concerned about inadequate investment could take steps to propose such investment.

The nature of such customer involvement is critical. To varying extents there is at present some opportunity for customers to express their views about transmission investment plans. There may be some concern that customers have insufficient information for this purpose. No doubt there is scope to improve this information.

However, the main proposal in this paper is that customers need more than simply the opportunity to express an informed view. They need to be able to exercise a degree of control over whether a proposed transmission investment goes ahead or not. This in turn means that transmission companies and planning organisations will need to take into account - more explicitly than at present - whether the investments that they are proposing fully meet the needs of customers. Specifically, they will need to ensure that transmission proposals are more coordinated than at present, do not crowd-out generation investments where the latter would be more economic, are not unnecessarily expensive, and are adequate to meet all economic requirements of customers.

There is obviously a question of what powers these customers should have and how this control is exercised. Should they share these powers with transmission companies and regulatory bodies or supplant them? Is consensus a sufficient basis for expressing a view? Or should there be a more formal system with votes for each type of customer, and if so how should these votes be distributed? Of relevance here may be the extent to which these customers pay for the transmission system or particular elements of it.

To help assess these questions, the paper now gives some illustrations of how arrangements for empowering customers work in other countries and other utility sectors. Ultimately what is needed is to develop an approach that is best suited to the needs of the Australian transmission sector. This is discussed in the final section of the paper.

4. Evidence from UK: Lighthouses and Airports

We start with an example from an earlier era: the building and financing of British lighthouses in the nineteenth century.² Previously, economists generally considered that lighthouses were typical public goods that needed to be publicly supplied and financed and/or regulated. In fact, however, they were supplied by private provision and financed by lighthouse dues on users – that is, ships passing by who paid when they came into port. These dues were determined by the shipowners themselves, with a view to financing approved investments in lighthouses. Institutional arrangements involving users thus overcame a potential public goods problem while leaving decisions to the lighthouse users and builders. Within this framework (which was supported by legislation), transactions costs were not a bar to effective negotiations between the users, nor has it been suggested that the pattern of investment was insufficient or inefficient.

An interesting recent development is the encouragement by the UK airport regulator (the Civil Aviation Authority or CAA) of so-called “constructive engagement” between British Airports Authority (BAA) airports and their airline users.³ The aim of this arrangement is that the airports and their users should agree the main elements of a business plan for the foreseeable future. This includes traffic forecasts, investment requirements and other parameters relevant to the CAA’s price control review for the forthcoming quinquennial period 2008 - 2013. The CAA will need to satisfy itself that

² R H Coase. “The lighthouse in economics”, *Journal of Law and Economics*, 17(2) October 1974: 357-376.

³ *Airports Review: Policy Update*, Civil Aviation Authority, 15 May 2006, chapter 8.

the interests of any parties not represented around the table are adequately protected. Subject to that, the intention is that the CAA will then accept those plans agreed by constructive negotiation rather than make its own determinations on these matters.

Previously, there had been numerous tensions between airlines and BAA. However, good progress is reported at BAA's two largest airports (London Heathrow and London Gatwick). There has been substantial agreement on almost all the above matters. Moreover, the parties have reported improved relationships and a desire to continue the process beyond this price control period.

In contrast, agreement has not yet been reached at BAA's Stansted airport. There is a difference of view as to the case for an expansion here, with the (predominantly low-cost) airlines disputing the need for an extension of the size and expense and timing proposed by the airport. There are also political issues involved, since the government previously gave priority to an extension at Stansted in preference to the expansion plan at Heathrow favoured by many airlines.

While this constructive engagement process is not yet complete, UK experience to date suggests that users and airports are indeed capable of negotiating mutually agreed and acceptable airport investment plans. Failure to agree an investment is itself instructive, and may be a salutary constraint on excessive or untimely investment.

5. Evidence from Argentina: Public Contest method in electricity transmission

In 1992 Argentina reformed its electricity sector along similar lines to the UK, with considerable restructuring and privatization. This was generally deemed a success.⁴ One rather novel aspect of Argentine reform initially attracted critical attention, namely the arrangements for transmission expansion. However, subsequent experience and research have shown the arrangements to have been remarkably effective in making transmission investment more efficient. The arrangement was as follows.

Existing transmission systems would be regulated on the basis of an incentive price cap, recalibrated every five years or so. However, major transmission expansions were no longer to be decided by the transmission owner or the regulator. They were henceforth the responsibility of the users of the transmission system. (Users here included generators, major consumers and distribution companies with responsibilities for supplying small consumers in their areas.) A new so-called Public Contest method required users to propose major expansions. All users within a defined Area of Influence of the expansion – the so-called beneficiaries of the expansion - would vote on the proposed expansions. Approved expansions were put out to competitive tender. All the users would then share the cost on the basis of their actual usage over an agreed amortization period.

The Public Contest method was adopted in order to avoid the inefficiencies and over-expansions of the previous era of public ownership. In economic language, the

⁴ E.g. Michael Pollitt, "Electricity Reform in Argentina: Lessons for Developing Countries", Cambridge – MIT Institute Electricity Project, CMI Working Paper 52, September 2004.

method was intended to overcome the incentive to gold-plating and the political pressures associated with regulated transmission. The users (or beneficiaries) of an expansion would be better-placed than the transmission companies or the regulator to decide whether the benefits of an expansion were worth the costs. The Public Contest arrangements were thus designed to maximize the role for market participants and competition, and to minimize the role for regulation.

Initial experience suggested to some that the method was unduly severe. In the mid-1990s, a major transmission expansion known as the Fourth Line was proposed to convey electricity to meet expanding demand in Buenos Aires. The Fourth Line had been long-expected and the regulator described it as 'much-needed'. But at the first vote the Line was rejected, though a subsequent proposal was accepted. Many held the rejection and delay to be an indication of the lack of success of the transmission expansion policy.⁵ Some said that a voting method involving users would be unworkable because of transactions costs.

A colleague and I have examined the history of transmission and its regulation in Argentina.⁶ On closer inspection, we find that the Fourth Line was not an economic project. The increased value of the electricity transmitted was less than the cost. Over time, the economic situation in the Argentine energy sector had changed. It was now more economic to build gas pipelines to Buenos Aires and to generate electricity there, than it was to build a new powerline to Buenos Aires. Criticism of the Public Contest method for delaying investment in the Fourth Line was therefore misplaced.

The Fourth Line experience was exceptional. Approval of that uneconomic project was largely explained by a particular provision for using accumulated transmission revenues to finance expansions in particular corridors. In general, the Argentine Public Contest method avoided uneconomic expansions while enabling numerous economic expansions to take place. It was characterized by mostly harmonious relationships between the parties rather than discord. Transactions costs were not a problem.

There was active competition to build the expansions that were put out to tender. The construction cost per kilometer of major lines was roughly halved. There was also innovation in construction methods.

There has been some discussion of the Area of Influence method used to determine beneficiaries and calculate their participation or vote. The calculation is done by the system operator using a simulation model based on the same scheduling model that it uses to determine nodal prices. There have been some concerns that this determines beneficiaries and votes in proportion to the usage of a new line instead of the benefits

⁵ Most commentators cite the important study by Chisari, O.O., Dal-Bó, P., and Romero, C.A., "High-Tension Electricity Network Expansion in Argentina: Decision Mechanisms and Willingness-to-pay Revelation," *Energy Economics*, 23, 2001, pp. 697-715.

⁶ Stephen C Littlechild and Carlos J Skerk, "Regulation of transmission Expansion in Argentina: Part I, State Ownership, Reform and the Fourth Line" and "Regulation of Transmission Expansion in Argentina: Part II, Developments Since the Fourth Line", Cambridge – MIT Institute Electricity Project, CMI Working Papers 61 and 62, The Cambridge-MIT Institute, 15 November 2004, available at <http://www.electricitypolicy.org.uk/pubs/wp.html>. Revised versions are in the course of a journal review process.

it confers, that it could be sensitive to the choice of reference node, and that it takes no account of externalities. Against this, the aim of the designers was to find a practical, familiar and relatively objective method that was generally accepted. This has been the case. In practice, the concerns mentioned have not proved a problem.

It is true that the national transmission system in Argentina is largely radial, so that external impacts of one expansion on other parts of the networks and on other users were relatively small. It is therefore interesting to note what happened when the same principles were applied to the sub-transmission network in Buenos Aires province, where the network is considerably more meshed. Essentially, the same method was applied and found satisfactory, even though there was provision for changing it by agreement. A supplementary method was developed for allocating the charges at each federal transmission node among the provincial users connected at that node.

A more significant issue at provincial level was the participation of provincial distribution companies as the main beneficiaries of sub-transmission expansion. There was initially a dispute as to whether the price controls set by the provincial regulator included provision for financing such expansions. Once that was resolved, the distribution companies and over 200 municipal cooperatives worked amicably to design, agree and finance a ten year plan for sub-transmission investment. They did so via a Regional Electricity Forum that included the transmission and sub-transmission companies as advisory members. The resulting Plan is in course of implementation but has been delayed by the economic crisis in the country.

Argentine experience shows that it is feasible to transfer decision-making power from transmission companies and regulatory bodies to transmission users, and to put proposed investments out to competitive tender. This approach brought about greater efficiency in Argentina by disciplining decisions about whether and how to make transmission expansions, and also by securing their construction and operation at lower cost.

6. Evidence from Chile: transmission expansion

The Argentine model reflected and improved upon a similar approach previously developed in Chile.⁷ Under the 1982 Electricity Law, as supplemented in 1990, provided for open access to transmission systems. But pricing and expansion of the transmission system depended upon bilateral negotiations between interested users and the transmission owner, with other users not having to pay for the first five years. A few large users such as generation plants and large customers including distribution companies built their own transmission expansions. But the fear of free riding discouraged users from cooperating to share the costs of other transmission expansions. (The designers of the Argentine Public Contest method defined a more precise basis of cost allocation and charging in order to overcome this problem.)

In view of growing concerns about a lack of investment in the transmission system, the Electricity Law Amendment of March 2004 (the Short Law) defined a new way of

⁷ Juan C Araneda and Sebastian Rios, "Transmission expansion under market conditions: the Chilean experience", *IEEE Powertech Conference Proceedings*, St Petersburg, June 2005.

calculating transmission tolls. It also created a new process to expand the transmission system with the cooperation of all parties, coordinated by the regulator.

In the main Trunk system, a Common Area of Influence is defined, within which generation companies pay 80 per cent and consumers 20 per cent of total transmission tolls. Outside that Area of Influence tolls are paid by generators if power flows towards the Area of Influence and by consumers if power flows out of it. Tolls are related by a formula to the value of the assets plus operating costs.

Every four years, a Trunk System Study determines tariffs in the Trunk system and also an expansion plan. New investments are put out to competitive tender. The Study is carried out by an international consultant and conducted by a committee comprising 8 representatives: 2 from regulators, 2 from generation companies, 2 from transmission companies, 1 from distribution companies and 1 from large consumers. There is provision for appeal to a Panel of Experts if necessary. The process is coordinated by the National Energy Commission.

The new Amendment is considered to be a success. Within a short time several new transmission projects were identified and put out to tender. Three new entrants were in competition with the incumbent for the first major project.

7. The concept and practice of negotiated settlements⁸

In many jurisdictions around the world, utilities are regulated by a traditional form of litigation process along the lines of US regulation. But in many of these jurisdictions including in North America itself, market participants effectively make decisions about a wide range of matters that are conventionally thought to be the province of regulation by means of litigation. They do so by means of negotiated settlements.

Traditionally, the regulated utility would provide information and give testimony. This would be challenged in court by the regulatory body and by intervenors. Then the regulatory body would decide the case. The settlement approach typically begins with the same initial process during which the company is required to provide relevant information. Then, in contrast to the litigated or regulated approach, interested parties including user and consumer groups negotiate a settlement or 'stipulation' with the regulated company. They put this proposal to the regulatory authority, and it is typically confirmed.

This practice is apparently widespread. Settlements have been used in a wide variety of regulatory contexts.⁹ At least one US state has actively demanded that a utility seek to achieve a settlement. I am told that settlements are widely used and supported in Australia, particularly in ports, freight rail infrastructure, gas pipelines and airports.

⁸ This section draws heavily on J Doucet and S C Littlechild, "Negotiated settlements: the development of legal and economic thinking", Electricity Policy Research Group Working Papers, No. EPRG 06/04, 2006, Cambridge: University of Cambridge at <http://www.electricitypolicy.org.uk/pubs/wp.html>, forthcoming in *Utilities Policy*, December 2006.

⁹ One study instances water, electric and telephone rate cases; sale of an electric plant and various ratemaking and accounting aspects of nuclear plant; and competition in telecommunications and new telecommunications offerings of private line service and customer-owned coin-operated telephones. Petrusis, R C. "NRRI Report: Commissions Use Negotiated Settlements to Expedite Regulatory Process", *NRRI Quarterly Bulletin*, 1985, 6: 379-390, at p. 381.

However, there has been little economic analysis of the practice until recently. It may therefore be helpful to indicate how thinking and practice have developed, even though these settlements may not have focused on electricity transmission systems.

Settlements have traditionally been seen primarily as a way of economising on time and cost, or reducing uncertainty, compared to traditional regulation which proceeds by litigation. The implication is that the outcome is unlikely to be significantly different from the outcome of litigated regulation.

More recently, however, it has been suggested that settlements better serve the needs of the parties. This is not a new claim, but it is an aspect that seems to be increasingly appreciated. The reason is that regulators do not know the precise situations and preferences of the parties involved. They have to make judgements according to their own perceptions and preferences rather than those of the parties. Their choice is not necessarily what the parties themselves would choose, and therefore not necessarily as acceptable. Some consumer advocate practitioners put it this way.

[W]hen the regulator makes the decisions, everyone loses something, and parties have no control over what they lose. In the negotiation process, each party chooses which among the many points it is willing to lose in order to gain something else. Although this may sound like a distinction without a difference, in fact, the trade-offs arrived at voluntarily are much more stable and effective. Negotiated settlements are actually more democratic because all parties participate in the decision. As a result the terms are more likely to be implemented with enthusiasm and effectiveness than if they had been imposed from above by a regulator. Furthermore, in an atmosphere of trust and negotiation, more information is freely shared, with the result that more comprehensive solutions can be developed.¹⁰

The greater involvement of parties themselves means that a wide range of issues is susceptible to settlement, and “some kinds of utility cases can be better resolved through negotiation than litigation.”¹¹ This is because “negotiation allows the parties themselves to make the trade-offs, instead of leaving it to the regulator to split the difference.”

Negotiated settlements also allow greater flexibility and innovation, and can achieve results that lie beyond the traditional litigated approach. It has been argued that the flexibility inherent in the settlement process may be by far the most telling ground for its encouragement, particularly in the evolving competitive context.

Flexibility is especially important now, as the utility marketplace moves from integrated monopolies to multi-party and/or unbridled competition. Since full

¹⁰ G J Palast, J Oppenheim and T MacGregor. *Democracy and Regulation: How the public can govern essential services*, London and Virginia: Pluto Press, 2003, p. 96.

¹¹ Palast et al. “These include energy conservation or efficiency programs, and payment and other assistance to the poorest citizens of society.” (p. 88) “Besides energy conservation cases, other types of cases have been successfully negotiated and settled, including the guiding principles of electricity industry restructuring in Rhode Island and Massachusetts, price-setting cases in New York and elsewhere, and cases in which the regulator was reviewing the operating performance of generating plants owned by an electric utility.” (pp. 96-7)

and effective competition will take years to accomplish, parties to utility proceedings must effectively function in this largely undefined transitional period. The creation of the new competitive environment will be far more successful if stakeholders are able to talk openly, share ideas, and challenge the traditional approaches that once suited the monopoly marketplace. ... By exploring new approaches, parties will be able to fashion solutions beyond the regulatory authority of a commission when they do not violate any important regulatory principle or practice.¹²

8. Evidence from US: negotiated settlements for gas pipelines at FERC

In the US, negotiated settlements appear to have been initiated or at least strongly encouraged by the Federal Power Commission (FPC) during the early 1960s as a way of working off a large backlog of regulatory applications. The view that settlements should become an objective of regulatory policy seems to have been accepted at the Federal Energy Regulatory Commission (FERC), which superseded the FPC in 1977. By 1980 settlements were reached in approximately two-thirds of all electric utility rate cases there, and in 1986 in over 70 per cent of gas pipeline rate cases. It was once claimed that FERC “resolves approximately 80 per cent of its caseload through negotiated settlements.”

Settlements evidently developed in various State commissions as well as federal ones. It would not be surprising if the majority of US States have now recognised settlements of some kind.

Recent research on FERC practice confirms the claims about the extent of settlements and the benefits of this approach. One study set out to determine how the settlement process at FERC differed from the formal adjudicatory process, how the outcome differed, and why the players settled a case.¹³ The author examined 41 natural gas pipeline rate cases from 1994 to 2000, of which 34 were settled in whole, 5 were settled in part, and two were fully litigated. He noted that a typical case involved many issues.¹⁴ He found that “the informal settlement process differs fundamentally from the litigation process, thus leading to significantly different outcomes.”¹⁵ The most significant outcome was one that FERC could not impose in a litigated case.

Perhaps the most innovative settlement outcome is the rate moratorium provision in 21 of the 39 settlements in the sample. It is remarkable that the rate moratorium, a simple form of price cap regulation, arises endogenously

¹²A P Buchmann and R S Tongren, “Nonunanimous Settlement of Public Utility Rate Cases: A Response.” *Yale Journal of Regulation*, 1996, 13: 337-345.

¹³ Zhongmin Wang, “Settling Utility Rate Cases: An Alternative Ratemaking Procedure”, *Journal of Regulatory Economics*, Vol. 26, No. 2, September 2004, pp. 141-164.

¹⁴ These include “the quality and variety of the services, the level and structure of the service prices, the inputs, and many other contractual issues such as the contract length and the timing of the following rate case”. (p. 142)

¹⁵ “In order to reach the ‘just and reasonable’ end result for a litigated case, FERC follows an issue-by-issue merits determination procedure. That is, FERC makes a separate decision on each of the issues, based on the findings of fact and its rules, policy and precedents. During the settlement process, however, the players could focus directly on the end result by bargaining over all the issues together as a package, so that they can make tradeoffs among the issues.” (p. 142)

from the settlement process of the traditional rate of return cases. FERC is prohibited by the governing statute from imposing a rate moratorium on the pipeline in a litigated case, but is free and willing to approve settlements with rate moratoria. (p. 142)

There is perhaps a question as to how far these rate moratoria were intended as a simple form of price cap in the sense of incentive regulation, as opposed to a way of providing a time at which the terms would be reviewed. However, the conclusion is not in doubt, that the main purpose of settlement was not to reduce uncertainty about regulatory decisions, but to achieve an outcome that could not be achieved under litigation.¹⁶

For present purposes, the main point is not to emphasise the innovative nature of negotiated settlements approved by FERC. Regulated transmission lines in Australia can already be made subject to incentive price caps, for example. Rather, the purpose is to show that market participants – pipelines and their users or customers – are indeed able to come to agreement on rate cases. Moreover, this approach has improved relationships between the parties. That is surely conducive to better coordination and more efficient investment.

9. Further evidence from US: negotiated settlements (stipulations) in Florida

The evidence and conclusions at FERC are mirrored by those in Florida.¹⁷ The Office of Public Counsel (OPC) has negotiated many settlements (stipulations) of rate cases before the Florida Public Services Commission (PSC). The OPC was set up to represent the citizens of Florida in utility matters. It often worked in tandem with representatives of consumers, particularly (but not only) larger ones.

For gas, electricity and telephones sectors in total, stipulations were agreed in 31 per cent of earnings reviews. These stipulations brought tangible benefits. From 1976 to 2002 stipulations accounted for 77 per cent of rate reductions, but only 0.7 per cent of allowed rate increases.

There is evidence that these settlements secured a much better deal for customers than regulation would have done. Across these three sectors, the average value of a rate reduction was \$49.6m with a stipulation and \$6.7m without. In the electricity sector, nine stipulations accounted for \$3.8bn worth of rate reductions. Detailed examination

¹⁶ “The empirical findings suggest that the players settle a pipeline rate case mainly to make the tradeoffs that cannot be made during the litigation process. Avoiding the uncertainty in the formal adjudicatory process is of secondary importance because the litigation outcome is apt to be fairly predictable, and for some cases is known.” (p. 143) “The settlement approach to ratemaking substantially expedites the regulatory process and leads to creative solutions that cannot be achieved through ratemaking.” (p. 162)

¹⁷ Stephen Littlechild, “The bird in hand: stipulations, the consumer advocate and utility regulation in Florida”, unpublished manuscript, 7 April 2003. Some initial results were published in “Consumer Participation in Regulation: stipulated settlements, the consumer advocate and utility regulation in Florida”, Market Design 2003 Conference, Stockholm, 17 June 2003, Slide presentation and conference paper (called Report) are in *Proceedings* at http://www.elforsk-marketdesign.net/archives/2003/conference/conferencemain_en.htm. Also Stephen Littlechild, “Stipulations, the consumer advocate and utility regulation in Florida.” Electricity Policy Research Group Working Papers, No. EPRG 06/15, Cambridge: University of Cambridge, 2006 at <http://www.electricitypolicy.org.uk/pubs/index.html>.

suggested that most of these reductions were attributable to the stipulations. They would not otherwise have been achieved. At the very least they were achieved earlier than they otherwise might have been.

What did the utilities gain from settlements in return for these very significant rate reductions? They saved some costs, but these savings were relatively small, estimated at under 0.5% of the amounts involved in the settlements. Perhaps companies avoided some uncertainty or embarrassment of public hearings. But mainly they achieved innovative modifications to the traditional Public Service Commission procedures, sometimes in the face of advice by Commission staff.

One example of such a modification was more flexible accounting procedures (including deferring accounting provisions, and either not increasing depreciation or even reversing it). More importantly, however, companies and users were often able to agree the adoption of revenue-sharing incentive arrangements lasting several years instead of traditional rate of return regulation or earnings-sharing schemes. That is, they were able to get rid of a limit on profits in return for accepting a limit on prices or revenues. In effect, they managed to achieve an incentive price-cap approach to regulation, which the traditional US framework of regulation via litigation was unable to deliver.

It remains to be seen whether Florida's experience is unique, associated with the person appointed as Public Counsel during this whole 25 year period. Whether it would generally be helpful to introduce or increase the role of consumer advocates in Australia is beyond the scope of this paper. But the idea of negotiated settlements with customer representatives there deserves further consideration.

10. Evidence from Canada: negotiated settlements for oil and gas pipelines¹⁸

Negotiated settlements have been encouraged by the National Energy Board (NEB) in Canada since the late 1980s and widely adopted since the mid-1990s. In contrast to the FPC in the US, the NEB was not driven by a desire to reduce a backlog of cases, although there was certainly an aim to reduce the frequency and duration of regulatory proceedings. Government deregulation policy was also an influence.

Importantly, oil and gas pipelines and shippers realised they could achieve their ends more effectively and more surely with settlements than they could by conventional litigation. Multi-year incentive agreements developed particularly rapidly among all the pipelines. Settlements have also been used to specify and improve service quality, revise information and publication requirements, and agree investments and risk-sharing arrangements for new facilities. One particularly innovative settlement provided for the transition of one pipeline's gas gathering and processing services from one type of regulation (conventional litigation) to another (a specially designed scheme of light-handed regulation). This latter scheme provided for negotiated settlements with individual shippers, information provision to facilitate price

¹⁸ This section draws heavily on J Doucet and S C Littlechild. "Negotiated settlements and the National Energy Board in Canada", Electricity Policy Research Group Working Papers, No. EPRG 06/[]. Cambridge: University of Cambridge 2006, at <http://www.electricitypolicy.org.uk/pubs/wp.html>. [forthcoming]

discovery, interconnection terms to reduce barriers to entry, and a complaint-handling procedure that envisaged the NEB as the last resort rather than the first.¹⁹

With the exception of one gas pipeline during the four-year period 2001-4, negotiated settlements have superseded the litigation of oil and gas pipeline toll and tariff cases for at least the last decade. They have also streamlined the regulatory process. For example, settlements last between 50 per cent and 150 per cent longer than previous litigated outcomes, and NEB processing times have been cut by between a quarter and two-thirds. Settlements have also provided a new forum for collaboration and increased value creation between pipelines and their customers. Observers and participants are in no doubt that this could not have occurred under the traditional litigated approach to utility regulation.

The key contributions of the NEB seem to have been twofold. One was to modify the settlement guidelines in 1994 to say, in effect, that if the process of settlement was acceptable (i.e. was open to all interested parties and reached general agreement) then the Board would deem the outcome just and reasonable and would not 'cherry-pick' the settlement. This assured the parties that their negotiations were not in vain. The other contribution was the 'generic cost of capital' decision that provided an explicit and uniform basis for annually updating the cost of capital of each pipeline in the absence of a settlement. This removed a main source of dispute and of market power, and thereby facilitated negotiation and agreement on the provision of services of increased value to customers.

In parallel with the development of negotiated settlements, NEB has put increased reliance on contracts instead of traditional regulatory procedures as a means of approving gas pipeline expansions.²⁰ Before granting approvals, the NEB must be satisfied that the pipeline expansion is necessary and that the associated tolls are just and reasonable. Traditionally, the NEB prescribed the provision of detailed information concerning supply, demand, purpose, justification and economic evaluation. It also required detailed information about project-specific gas markets and calculation of tolls based on a cost of service methodology with rate base, rate of return, rates of depreciation and operating costs prescribed by the NEB.

Since 1995, however, the NEB has approved a number of pipeline expansions based on risk-sharing agreements between the pipelines and shippers under which the shippers contract for capacity and agree to pay specified tolls. The existence of the contracts has sufficed to determine that the pipeline is needed and that the tolls are just and reasonable. With one exception these tolls were established by contract and not subject to cost of service methodology.

Ongoing research on the use of settlements at the Energy and Utilities Board (EUB) in Alberta suggests that the EUB takes a more 'hands on' approach than the NEB, and places more emphasis on generating information for the record.²¹ Nonetheless,

¹⁹ On this settlement that provided for light-handed regulation, see also N J Schultz. "Light-handed regulation", *Alberta Law Review*, 37(2) 1999: 387-418.

²⁰ Keith F Miller, "Energy regulation and the role of the market", *Alberta Law Review*, 37(2) 1999: 419-436.

²¹ J Doucet and S C Littlechild. "Negotiated settlements and the Alberta Energy and Utilities Board" (research in process 2006).

settlements have been increasingly adopted in Alberta, and take roughly half as long to complete as litigated cases. There, too, settlements have also been innovative. For example, one settlement introduced performance based rate making in the gas sector; another settlement was the means of implementing the Regulated Rate Option (RRO) in the electricity sector. The latter is an innovative form of retail price control based on a risk-sharing approach to energy procurement contracts, which is unlikely to have been possible under traditional litigation.

11. Summary and implications of international experience

The examples given above differ in various respects. They cover actual experience in a variety of different sectors and countries: lighthouses and airports in the UK, electricity transmission in Argentina and Chile, gas pipelines at FERC in the US and utilities generally in Florida, oil and gas pipelines in Canada and electricity utilities in Alberta.

However, the experiences all have certain important lessons in common. In all cases, important aspects of the operation of these sectors are determined by customers of the network utility or by agreement with them. In some cases (eg UK airports), users agree demand forecasts and investments but not charges for usage. In other cases (eg FERC and Florida) users typically agree charges but not investments. In yet other cases (eg Argentina and Canada) users often agree both. In some cases (eg Argentina) there are rules for voting and these are closely prescribed. In other cases (eg Chile) there is a committee with defined membership. In yet other cases (eg the UK, US and Canada) there are no such rules and the process is one of seeking mutual agreement.

In all these cases, and often in face of initial scepticism, it has generally proved possible to obtain substantial agreement between customers themselves, and between customers and network providers. There has been no significant challenge to the ensuing pricing or investment proposals. All parties prefer this process to conventional regulation. There has been substantial improvement in relations between the parties. There is also a wish to continue and extend this means of operation.

When customers are allowed a significant role in decision-making, the role of regulation is altered but not eliminated. Conventionally, the decision to regulate a utility or other sector means that the information, judgements, preferences and decisions of the market participants are replaced by the information, judgements, preferences and decisions of the regulatory agency. Even if the agency wishes to replicate the effects of a competitive market, it still makes all the key decisions. This has well-known limitations, associated with the information available to the regulatory bodies and the influences that might be brought to bear on them. The active involvement of customers changes that. Subject to a satisfactory settlement process, the regulatory agency allows market participants to make the key decisions themselves, using their own information, judgements and preferences.

In some circumstances the purpose of regulation might be precisely to prevent market participants from taking their own decisions, and to substitute regulatory decisions reflecting a different view of the public interest. If so, it may not be appropriate to give a greater role to customers. But much regulation is not of this kind. It is often justified by some perceived 'market failure' such as market power or externalities or a

free rider problem. In such cases there is no presumption that the judgements of market participants are inadequate. In this case, an active role for customers can be encouraged. In doing so, the regulatory agency may need to take steps to address any specific market failure. But it does not have to substitute its own judgements on the main investment decisions.

In all the cases studied above there is a more limited but nonetheless still critical role for regulation. Essentially, it is enabling the market to work. To use the words of an early proponent, “agencies should be viewed not primarily as decision makers ... but as a means of helping the parties ... work out a result that is both mutually acceptable and in the public interest”.²²

12. Adapting these ideas for electricity transmission investments in Australia

The success of customer involvement in these various countries suggests that it is worth considering its use in the Australian transmission sector. There are obviously many different ways of doing that.

Following practice in Argentina, one possibility would be substantially to remove the role of transmission companies and regulatory bodies in actually deciding on transmission investments. One could require users rather than transmission companies to propose and make investment decisions, and specify voting rules for users that might or might not also specify the sharing of charges. Such an approach could be accompanied by an obligation to put out to tender any proposed expansion, at least above a specified size. Such an approach may warrant consideration in those states where the nature of decision-making by regulators and transmission entities is associated with excessive investment.

If this is considered a too radical change from present arrangements, something less severe might be considered. For example, given that some transmission planning bodies already exist in Australia, an existing planning entity might be responsible for putting forward a proposed transmission programme. However, this programme would be assessed by representatives of customers that ultimately foot the bill. In this context, the provisions in Chile would seem to merit consideration. The Australian planning bodies could report to a Transmission Committee comprising representatives of all kinds of interested parties especially customers (including generators and end-users) as well as transmission companies. This would not just be an advisory committee: approval by the Transmission Committee would be required before a transmission programme could go ahead.

In states where there is no explicit transmission planning body in Australia at present, it does not mean that one needs to be created, at least not by the federal or state governments. Argentine experience suggests the feasibility of a transmission expansion (and reinforcement) plan being drawn up by an organisation of customers (always including generation companies and distribution and/or supply companies as well as large users).

²² T D Morgan. “Toward a Revised Strategy for Ratemaking.” *University of Illinois Law Forum*, (1) 1978: 21-78.

It would be possible to encourage this approach within the present federal and state regulatory frameworks. One could design or modify statutory duties to encourage the role of customers without removing an ultimate role for regulation. For example, the Alberta Energy and Utilities Board Act 1995 (s132) provides that “the Board must recognize or establish rules, practices and procedures that facilitate negotiated settlement”. A UK utility regulator is presently obliged to ‘protect the interests of consumers, wherever appropriate by promoting effective competition’. It would be possible to add the clause ‘and by promoting negotiated settlements or other arrangements agreed between licensees and consumers’.

Encouraging interested parties to agree in this way might be particularly appropriate where the concern is primarily associated with coordination and timing. It is for consideration whether such an approach (on its own) would go far enough in states where there is concern about excessive investment by the transmission company. Even there, however, the transmission company might see advantage in an agreed transmission programme rather than one that is constantly subject to dispute.

In all these cases, it is for consideration whether there should be weighted voting among customers, and if so whether votes should be weighted by transmission usage or transmission charges paid. The simple requirement for approval by a customer Committee might suffice to ensure that proposed projects were soundly based and better reflected the needs of customers.

There will naturally be questions about who would represent end-user customers. However, in each particular context it should be possible to identify organisations that could fill this role – indeed, they would tend to identify themselves. The very largest industrial and commercial consumers can represent themselves. In all countries there are generally groups representing large and medium-sized energy users. Smaller businesses might be represented by local chambers of commerce or trade associations. There are often government-appointed consumer bodies with responsibilities to protect and advise domestic/residential users. A variety of non-government organisations represent subsets of interested parties.²³

There would need to be provisions for customers to obtain relevant information from the companies, perhaps via the regulator. Customer groups could commission expert advice as required. In some jurisdictions there is provision for the settlements to cover the legitimate costs of such intervenors. In Alberta the EUB can decide to reimburse such costs. The EUB is taking steps to ensure that such reimbursement does not stimulate inefficient duplication of evidence and argument.

²³ To illustrate, in Florida intervenor parties participating in electricity settlements have often included (in addition to the Office of Public Counsel) the Florida Industrial Power Users Group and various of the Office of Attorney General, Florida Retail Federation, Commercial Group, Federal Executive Agencies, American Association of Retired People, Sugarmill Woods Civic Association, Lake Dora Harbour Homeowners Association, Coalition of Local Governments, Lee County local government, Florida Consumer Action Network, South Florida Hospital and Healthcare Association, Coalition for Equitable Rates, Florida Alliance for Lower Electric Rates Today, a variety of individual large users such as Occidental Chemical Corporation, White Springs Agricultural Chemicals, Tropicana Products, Georgia Pacific Corporation, Publix Supermarkets Inc, Dynegy Midstream Services LP, and even interested individuals such as Thomas and Genevieve Twomey.

The initial arrangements in Argentina made no explicit provision for a regulator to propose and enforce transmission investments in the absence of proposals from users. Over time, provision was made for transmission companies or the system operator to propose investments that might be of particular relevance to security of supply. In Australia it might be considered advisable for a regulatory backstop in the event of the companies and users failing to agree on certain aspects of investment.

A regulatory body might be able to take certain actions to diffuse issues where agreement is unlikely to be reached in order to facilitate agreement on other issues. For example, the NEB specifies the allowed return on capital in the event that customers and the utility fail to agree a rate. The CAA does not expect airports and airlines actually to agree on this rate of return but hopes that parties will nonetheless agree on an investment programme, presumably in light of the return on capital that the CAA is expected to allow. More generally, in the absence of a provision to put new construction out to tender, a transmission regulator might price the capital expenditure items 'on the menu' of a possible transmission expansion programme, but leave it to consumer groups to specify the items that should appear on the menu and to choose which items to accept.

Working out all the details of an approach for fully involving customers in the choice of transmission investments in Australia is beyond the scope of the present paper. The best approach could vary from one state to another. It could usefully be put for the consideration of customer groups themselves. Experience elsewhere suggests that a suitable approach can be found to provide results that are acceptable to all the parties and preferable to conventional regulation.