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Analysis of the Use of Related Parties by Electricity Network Service Providers

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economics | research | forecasting | public policy

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Executive Summary

The Australian Energy Market Commission (AEMC) is currently deliberating on proposed changes to the National Electricity Rules (NER) advanced by the Australian Energy Regulator (AER). One aspect of the AER's proposal concerns the treatment of related party contracts, where a network service provider (NSP) outsources activities to another entity with which it has a close economic connection, such as joint ownership.

To assist its deliberations the AEMC has asked Covec to investigate and report on a range of related party issues. In this report we:

- Document related party contracting for a sample of NSPs;
- Summarise the current debate on related party contracting issues and review the history of that debate;
- Analyse the treatment of related party contracting in previous regulatory determinations;
- Describe recent developments with a view to identifying trends in related party contracting; and
- Analyse the incentives NSPs have for both engaging with related parties and for efficient pricing in those engagements.

Our investigations have been largely centred on Victoria where there is a history of using related parties and where the previous state-based regulator, the Essential Services Commission ESC was responsible for reacting to those arrangements. We have taken particular notice of the way the AER assessed related party transactions relative to the ESC's approach.

There is an important difference between the way the ESC assessed the efficiency of NSP forecasts that relied on related party contracts at the end of the ESC's life, and the way the AER has assessed those forecasts. It relates to the counterfactual scenario, for which the ESC used a stand-alone NSP undertaking the relevant activities in-house. In the AER's view, that sets too high a cost standard to support a presumption that the outsourced costs are consistent with arm's length trading. As a consequence, the AER's approach seems somewhat more strict than the ESC's final position, a situation that is not liked by the NSPs.

In most other respects, we found a close coherence between the AER's approach and views and those that marked the ESC's final decisions. Both regulators appeared concerned to ensure that cost efficiencies secured through alternative business structures generally (including mergers and contracts with related parties) are shared with consumers within a reasonable time frame. Both have rejected a range of arguments in support of the payment of margins to related parties.

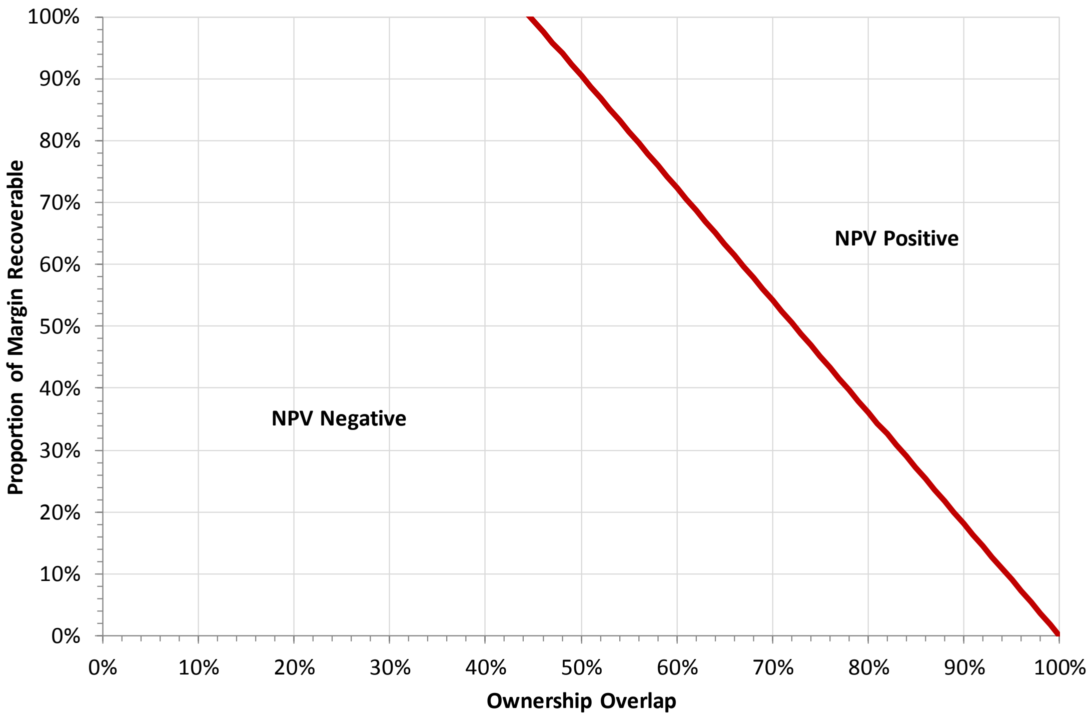
Our analysis of the AER's 2010 determinations suggests that firms using related parties are unlikely to meet an AER criterion known as the "presumption threshold", which means in practice that, for these NSPs, the AER will not presume that its contracting has been undertaken on an arm's-length basis. In these situations, the AER looks at the actual direct costs of the contractor and considers whether there is a case for any margin to be paid to the contractor over and above direct costs.

Secondly, once an NSP has failed by reason of its contracting arrangements to clear the presumption threshold, there will be a higher evidentiary burden on NSPs seeking approval from the AER for margin payments to related parties. That said, we note that the AER has a history of delving below the top line of forecasts and making separate decisions on the components of a forecast where there are grounds to differentiate.

Our investigation suggests that there may be a nascent trend towards less use of related party contracting. This is certainly the case for some individual NSPs, who cited a mix of regulatory and commercial drivers for initiatives that seek to either un-wind or at least narrow the scope of their related party contracting. The regulatory motivation is simply to avoid the attentions of the AER, and potentially the risk associated with having claims for related party margins declined. Commercially, it was suggested to us that the relevant markets are evolving away from outsourcing certain functions, particularly those involving judgement, design and management.

We analysed the incentive for NSPs to pay margins to related parties using a simplified theoretical model, the results of which are summarised in Figure 1.

Figure 1: Incentives to Pay Related Party Margins



The model allowed for different levels of ownership by the NSP of the related party, plotted along the horizontal axis, and different fractions of the margin allowed by the regulator to enter the RAB. When the NSP owns a large share of the contractor, it can be financially beneficial (NPV Positive) for the NSP to pay an inflated margin, even if something less than 100% of that margin is allowed to enter the RAB.

However at smaller ownership shares (ie towards the left side of Figure 1), doing so is not financially beneficial, even if there is full pass-through of the margin into the RAB. This kind of model is potentially useful to the AER in testing related party structures against its presumption threshold.

Overall, we found strong evidence that the AER is able to, and does, closely investigate outsourced contracts and is quite capable of disallowing inappropriate margin claims at the outset of a regulatory period. The risk motivating the AER's rule change proposal is that the impact of related margins gets rolled into the RAB for the next regulatory period. In our view, an ex-post review of prudency and efficiency, looking back at the end of a regulatory period would provide an opportunity for the AER to mitigate this risk.

1 Background

Some electricity network service providers (NSPs) in Australia engage "related parties" to perform various services. These related parties are separate companies that are not themselves subject to regulation but partially or completely share ownership with the NSP. In such a situation, costs paid by the NSP to the related party are not a net financial cost to the common shareholders of the NSP and the related party.

The related party "margin" refers to the difference between the contract price and the related party's actual direct costs to provide the service. Outsourcing contracts of this type generally use pricing that identifies several components, and it is common for one of those components to be labelled "margin" or some similar term, such as "overhead". We are not aware of any compulsion to split components of pricing so as to disclose a margin, but this practice appears common.

A range of explanations for these margins have been advanced, as discussed further below (section 3.2). Of the many possible rationales for paying a related party margin, two possible options are that margins reflect:

- efficiency gains achieved by the related party; or
- a profit margin claimed by the related party.

Within this context, the current National Electricity Rules (NER) allow the actual value of related party margins to be capitalised into the NSP's regulatory asset base (RAB) each period and the NSP earns the regulated rate of return on the margin in subsequent years. This process occurs regardless of whether the AER determines that a related party margin is inefficient.

There are two concerns that have arisen from this state of affairs. First, efficiency gains created as a result of using related parties will be retained by the suppliers and will not be shared with consumers. Potentially more seriously, given that such margins do not represent a net financial cost to the common shareholders of the NSP and the related party, there is a concern that such margins can be used to artificially inflate the RAB.

In response to these concerns, the AER has proposed that the NER be changed so that if the AER determines a related party margin (or proportion of a margin) to be inefficient and to be excluded from forecast expenditure, then such margins would also be excluded from the RAB during the rollover process in each regulatory period.[1]

To assist it to better understand this issue, the Australian Energy Market Commission (AEMC) engaged Covec to carry out the following tasks:

1. Document the current use of related parties by NSPs and produce a detailed 'map' of related party relationships for two NSPs;

[1] *Rule change proposal: Economic regulation of transmission and distribution network service providers*, AER, September 2011 at section 6.7.

2. Summarise the debate on this issue so far;

3. Compare determinations on related party margins and expenditure by two NSPs, including analysis of drivers for any differences;

4. Review qualitative or quantitative evidence of the effects on actual capex for NSPs that engage related parties versus those that do not;

5. Analyse the effects of related party relationships on the efficiency incentives of NSPs; and

6. Draw conclusions about whether and how capex efficiency differs between NSPs that use related parties versus those that do not.

Our research for this project was informed by:

- Written submissions made to the AEMC about the AER's rule change proposal on the related parties issue.
- Discussions with the following NSPs and interested parties:
    - Jemena
    - Citypower / Powercor
    - United Energy
    - ElectraNet
    - SP AusNet
    - The AER
    - The Victoria Department of Primary Industries
- Reviews of previous regulatory determinations where related party issues were debated including
    - The ESCV's review of gas access arrangements in 2006; and
    - The AER's determinations for Victorian electricity and gas distribution NSPs in 2010.

2 Existing Related Party Relationships

In this section we describe the current use of related party relationships by NSPs. We map out in detail the related party relationships used by two NSPs (Jemena and Citipower/Powercor). We also discuss briefly the use of related parties by other NSPs.

While this reflects our knowledge of the current state of affairs, we note that the use of related party relationships by these and other NSPs have changed over time and continue to change. Some recent developments regarding the use of related parties by NSPs are outlined in section 4.

2.1 Jemena

The Jemena group of companies includes two asset holding companies, Jemena Electricity Networks (JEN) which owns distribution networks in Victoria and Jemena Gas Networks (JGN) which owns gas distribution networks in New South Wales. These companies acquire services from a related party, Jemena Asset Management (JAM). All three of these companies are 100% owned by Singapore Power Ltd.

Singapore Power also owns 51% of SP AusNet a listed NSP that owns electricity distribution and transmission networks and gas distribution networks in Victoria.

There is an asset management agreement (AMA) between JAM and JEN and a similar agreement between JAM and JGN. These agreements were renegotiated during 2009-10 using a carefully designed and documented process that sought to replicate competitive market disciplines, though there was no competitor for JAM's role. The AMAs are broad in scope, covering the following functions:

- Asset management and planning
- Routine and non-routine capital works
- Network operations and maintenance
- Information systems
- Marketing and billing; and
- Meter reading and data management.

As discussed further below, we understand that work is currently under-way that will reduce the scope of the AMAs. There is no end-date on the AMAs, which survive until terminated.

¢Information has been omitted (here) in accordance with section 24 of the Australian Energy Market Commission Establishment Act 2004 on the basis of claims for confidentiality made in relation to the information since publication of this report.¢

Provided the total terms of the contract give JAM incentives for cost efficiencies (as appears to be the case), this provision creates a ratchet effect on JAM which continually drives costs down and then passes the benefits through to the regulated NSP in the next year. Consumers will not benefit as quickly because of the time lag created by the regulatory period, but pass through will occur on a time scale similar to that for an NSP that makes similar efficiency gains without using related parties.

2.2 Citipower / Powercor

Citipower / Powercor outsource various services to Powercor Network Services (PNS) and CHED Services (CHED).

As described on the Citipower / Powercor website, PNS "is a non-regulated project management, supply chain service, engineering, design and construction services business, operating in markets across Australia and internationally, and providing solutions to electricity utilities, land developers, infrastructure providers and commercial/industrial energy consumers."[2] CHED Services provides back office services to Citipower and Powercor.

[2] http://www.powercor.com.au/Latest_News/_71/

Citipower, Powercor, CHED Services and PNS are subsidiaries of an umbrella company called CHEDHA Holdings. In turn, CHEDHA Holdings is 51 per cent owned by Cheung Kong Infrastructure Limited and Power Assets Holdings Ltd, both of which are part of the Cheung Kong Group. The remaining 49 per cent is owned by Spark Infrastructure.

The relationships between Citipower / Powercor and PNS and CHED are therefore related party relationships, with all of these entities sharing the same shareholders.

We understand that around 80% of the capex and opex expenditure of Citipower / Powercor goes to PNS and CHED. However we understand that the service relationships are not exclusive and Citipower / Powercor do operate competitive tenders for some specific projects.

2.3 Other NSPs

We understand that other NSPs use related parties to a lesser extent than Jemena and Citipower / Powercor, however these relationships have changed over time. The following are brief summaries of the use of related parties by NSPs that we spoke to for this project.

United Energy formerly outsourced almost all functions to Jemena Asset Management (JAM). However in late 2010, United Energy conducted a tender for services which saw it contract with JAM and Tenex (in different regions). United Energy is 66% owned by DUET and 34% owned by SPIAA, and SPIAA owns 100% of JAM. United Energy's relationship with JAM is therefore that of a related party, however the ownership overlap is only partial.

ElectraNet does not use related parties for any services.

SP AusNet does make use of related parties, but these do not comprise a significant fraction of total expenditure and there is not complete ownership overlap. SP AusNet contracts to a management company SPI Management Services (SPIMS) which provides management services to the three networks within this group of companies,[3] and to an IT services provider (EB Services) which provides services to Jemena and SP AusNet. These two service providers are owned by Singapore Power, which owns 51% of SP AusNet.

[3] SP Australia Networks (Transmission),SP Australia Networks (Distribution), and SP Australia Networks (Finance) Trust.

3 Summary of the Debate

In this section we summarise the key arguments that have been made in the debate on related party margins in Australia. We review:

- The 2008 decision of the Essential Services Commission (ESC) of Victoria for Multinet.
- Determinations made by the AER in 2010 which considered related party transactions.
- The current AEMC consultation on the AER's rule change proposal.

3.1 2008 Victoria Gas Determinations

We have reviewed the 2008 decision of the Essential Services Commission (ESC) of Victoria for Multinet, particularly chapter 5 of that decision that concerns outsourcing arrangements.[4] This decision was commended to us during consultation as reflecting the culmination of debates in Victoria regarding related party contracting at that time.

The ESC noted that the pursuit of cost reductions offers a legitimate economic motivation for NSPs to outsource various activities. It took the view that NSPs should be able to demonstrate such a motivation and noted several ways this could be achieved, including:

- Evidence that the NSP considered cost reductions when entering into the contract and weighed up the alternatives before committing to outsourcing;
- Identification of economies of scale, scope or other efficiencies available to the contractor but not to itself; and
- Evidence that if it undertook the activities itself, its costs would be higher than the contract payments.

The NSPs argued that the Commission should accept benchmarking information that compared

- The margins paid to outsourced contractors against relevant industry benchmarks; and
- The NSPs' operating costs relative to those of other distribution businesses.

In response the ESC noted that there is no necessary connection between margins defined in outsourcing contracts and the efficient costs of the outsourced services. The ESC had some practical concerns with the actual benchmarking evidence submitted to

[4] Essential Services Commission, Gas Access Arrangement Review, 2008-12, Final Decision, Multinet, 7 March 2008.

it, and also noted that such evidence was backward looking and therefore less than fully informative as to the efficiency of the forecasted costs.

The ESC's approach was to start by examining the costs incurred by the outsourcing contractor, and from that point to consider:

- Whether the contractor is able to provide the outsourced services at a lower cost than the NSP could obtain elsewhere;

- Efficiencies on the part of the contractor over the life of the contract;

- Whether the actual costs incurred by the outsourcing contractor include:
    - a return on relevant assets employed by the contractor in undertaking the contracted activities (where such a return is not otherwise provided for) and
    - the recovery of an appropriate portion of relevant common or overhead costs; and

- how the contract provides for the allocation of risk between the NSP and the contractor.

In its final decision, the ESC accepted some criticism of its earlier (draft) treatment of certain corporate overhead costs that were included in outsourcing contracts. Referring to a counterfactual scenario in which the NSP is a "simply structured listed entity ... [with] no multiple layers of ownership and that the listed entity owns and operates the business", the ESC formed the following views about corporate overheads:

- The costs that would be incurred by such a firm for corporate governance, treasury functions, investor relations, human resources management and statutory reporting would meet the requirements for inclusion.

- Costs associated with, or arising from management of the equity holders' ownership interests (including a parent entity's ownership interest) in the distribution business would not meet the requirements for inclusion.

- Permitted operating costs would not include the cost of capital financing. Where capital is to be raised for new investment, the costs of doing so should, if allowed, form part of the RAB.

Having set out these positions, the ESC then evaluated the evidence supplied by each NSP and formed an individual determination for each. The ESC's evaluation involved examination of the structure of the outsourcing contracts and the range of other issues noted above.

One element of this determination by the ESCV has become particularly contentious as the debate has evolved. It relates to using a "stand-alone" NSP as the benchmark against which to assess costs invoiced by related parties. Because such a firm will not benefit from any of the economies of scale that are available to specialise network management firms, the stand-alone NSP will tend to have relatively high costs, which in turn permits the outsourced contract to have a larger total value.

3.2 AER determinations in 2010

During 2010, the AER made several assessments in which related party transactions were considered. For example, in its February 2010 draft determination on JGN, it set out three principles as follows:

1. Margins on services provided by external providers are not, in principle, incompatible with the requirements of the National Gas Rules (NGR)

2. The AER must be able to verify that the total cost proposed, including any margin applied to a cost base, represents the lowest sustainable cost of providing the service. This may be demonstrated if the costs, including the applicable margin for providing services, are the result of a competitive tender process.

3. Applying a margin where the underlying activity is not undertaken by the party that is charging a margin, is inconsistent with the requirements of the NGR. The AER does not consider that such cost structures can be demonstrated to be efficient.

These principles were repeated in the AER's draft decision on Victorian electricity distribution NSPs, in June 2010. That decision outlines a two stage process used by the AER, in which the first stage, henceforth referred to as the "presumptive threshold test" is to determine whether it is safe to presume that a contract entered into by a NSP is efficient. The AER asked itself two questions to assess this.

- Did the service provider have an incentive to agree to non-arm's length terms at the time the contract was negotiated (or at its most recent re-negotiation)?

- If yes, was a competitive open tender process conducted in a competitive market?

In respect of related party transactions, the answer to the first question will generally be yes, though the AER does note that the minority shareholdings may weaken or eliminate the incentive to contract on non-arm's length terms. Based on our discussions with NSPs, we expect that the answer to the second question will frequently be "no", so these contracts will tend to fall outside the (relatively) safe harbour defined by the AER's first stage of analysis.

The AER's second stage analysis depends on the outcome of the first stage. In situations where the AER feels unable to presume efficient contracting, it will look at the

> "contractor's actual costs—which in most circumstances will be the actual (direct and indirect) costs of a related party—as the 'starting point' and then examine whether there are legitimate reasons to justify a margin above these costs."

In considering the rationale for adding a margin to actual costs, the AER:

- considers and rejects the ESCV's previous use of a stand-alone fully in-sourced network as the relevant counterfactual, or reference scenario;
- considers and accepts the ESCV's previous treatment of common costs;
- considers that any profit margin allowed in the contract would need to be backed by evidence of assets owned by the contractor rather than the NSP;
- expects that in a competitive market contractors would not persistently benefit from greater efficiencies than other contractors;
- does not consider that intangible property such as "know how" are a sound rationale for adding a margin over costs; but
- considers that it is legitimate to allow a margin to cover self-insurance by the contractor against asymmetric risk provided these are risks are not already compensated in the NSP's regulatory model.

The AER re-iterated its preference for a two-stage process involving a presumptive threshold test in its final decisions on both gas and electricity distribution network regulation in 2010. Commenting on alternative assessment models proposed by NSPs in the context of the Victorian electricity distribution decision, the AER considered these were very similar to its own approach except in the use of a "stand-alone" reference comparator. The AER continued to consider this an inappropriate benchmark.

3.3 2011/12 AEMC Consultation

Following the AER's original rule change proposal, the AEMC issued a consultation paper[5] and a directions paper,[6] and submissions from interested parties were received on both of these papers. The following summarises the key views put forward by the parties in those submissions.

3.3.1 The AER's views

In its rule change proposal, the AER commented that the use of related parties "may be an efficient arrangement where the costs of the service reflect those obtainable in the competitive market.[7] On the other hand, there are circumstances where these related party margins paid by the NSPs do not reasonably reflect efficient costs and are excluded from forecast expenditure." The AER argued that because the NER requires

[5] *Consultation Paper: Consolidated Rule Request – National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2011*, AEMC, 3 November 2011.

[6] *Directions Paper: National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2012*, AEMC, 2 March 2012.

[7] *Rule Change Proposal: Economic regulation of transmission and distribution network service providers*, AER, September 2011.

the actual value of capex to be rolled into the RAB, the NER “do not adequately address the incentive for NSPs to seek outcomes contrary to the efficient objectives …”.

In response to a question from the AEMC, the AER argued that stronger capex incentives would not eliminate the need for changing the treatment of related party margins in the NER. The AER argued that even if related party margins were only partly recoverable, there could still be an incentive for such margins to be inefficiently high, and the AER provided numerical examples to demonstrate this.[8]

In its submission on the directions paper,[9] the AER argued that related party margins are a “special case” among capex issues because the financial effects on the NSP’s shareholders depend on the actions of the related party as well as the actions of the NSP. The AER argued that neither a capex efficiency benefit sharing scheme (EBSS) nor a capex sharing ratio could fully address the incentive for a related party of a NSP with common ownership to inflate the margin charged by the related party to the NSP. The AER concluded that its proposed rule change to treat related party margins consistently with how the margins were treated in the capex forecast is the only way to ensure that related party margins are efficient.

3.3.2 NSPs’ views

Jemena expressed a concern that the AER’s proposed rule change would create asymmetric incentives because it gives NSPs no incentive to reduce related party margins below the forecast value.[10] Jemena stated that the proposed rule change creates a high-powered incentive to reduce capex, in contrast to the current design of the NER, and that contracting arrangements are fluid and may change over time. Jemena argued that the AER’s proposal may raise a barrier to efficient changes in contracting arrangements.

Jemena also argued that related party margins have a “second order” influence over capex incentives, because, given an NSP decides to outsource some services, its shareholders will be required to provide the same amount of capital regardless of whether the provider is related or unrelated, assuming the margin is the same in both cases.[11] Jemena expressed the view that the extent of any difference between incremental margin and incremental costs is unlikely to materially affect the shareholders’ incentive to provide capital, particularly when capital is constrained.

Citipower / Powercor and ETSA accepted that under the current NER there may be scope for actual capex to include inefficient related party margins, however expressed a concern that the AER’s proposed changes are ambiguous and create uncertainty which

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[8] *Response to AEMC queries on AER network regulation rule change proposals*, AER, 2 February 2012.

[9] *Submission: AEMC Directions Paper: Economic regulation of Network Service Providers*, AER, April 2012.

[10] *Rule Change Requests Relating to Economic Regulation of Network Service Providers: Submission from Jemena Limited to the Australian Energy Market Commission*, Jemena, 8 December 2011.

[11] *Rule Change Requests Relating to Economic Regulation of Network Service Providers – Directions Paper ERC0134: Submission from Jemena Limited to the Australian Energy Market Commission*, Jemena, 16 April 2012.

may discourage efficient investment.[12] Citipower / Powercor and ETSA argued that the proposed rule change may limit expenditure rolled in to the RAB to the amount in the distribution determination, rather than an amount determined by assessment of the forecast amounts at the distribution determination stage. They concluded that this may potentially strand efficiently incurred costs because the dynamic nature of business and market conditions are ignored. Instead, they argued that related party margins should be allowed to be rolled into the RAB provided they are consistent with the framework for assessing these margins established in the prior distribution determination.[13]

Citipower / Powercor and ETSA noted that the decision to use related parties "is driven by the desire to take advantage of the greater potential for cost efficient provision of [services] … and to allow NSPs to focus on long term asset ownership and performance". They stated that internal approval processes for capex are rigorous and designed towards only efficient capex expenditure.

United Energy and Multinet Gas (UE and MG) also expressed the view that contractual arrangements may change during a five year regulatory period, and so the case for including or excluding related party margins from the RAB should be assessed on its merits at the time of the decision.[14] UE and MG argued that related party contracts have become unworkable due to regulatory pressures and have exited from such contracts as a result. They proposed that related party margins should be examined on the merits and a fixed view is not appropriate. UE and MG noted that the AER's analysis of the incentives to inflate related party margins assumed 100% ownership overlap, and UE and MG argued that this may not always be true and so the problem may only exist in theory and not in practice.[15]

3.3.3 Other parties' views

The Victoria Department of Primary Industries (DPI) supported the AER's proposed rule change regarding related party margins and argued that "in the absence of this rule change the NSPs have an incentive to enter into related party contracts for any arbitrary amount so that the capex they subsequently incur can be rolled into the RAB."[16] The DPI argued that the enhanced information gathering powers granted to the AER to enable it to look inside related party contracts have been ineffective, due to the AER's decision to roll actual related party margins into the RABs.[17]

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[12] *Joint Response to AER and EURCC Rule Change Proposals (ERC0134 / ERC0135)*, ESTA Utilities, CitiPower and Powercor Australia, 8 December 2011.

[13] *ETSA Utilities, CitiPower and Powercor Australia: Joint Response to AEMC Directions Paper (ERC0134 / ERC0135)*, ETSA Utilities, CitiPower and Powercor Australia, 13 April 2012.

[14] *Consolidated Rule Request – National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2011*, United Energy and Multinet Gas, 8 December 2011.

[15] *Re: Directions Paper – National Electricity and Gas Amendment Rule 2012*, United Energy and Multinet Gas, 16 April 2012.

[16] *Submission to the AEMC's Consultation Paper (ERC0134) – Consolidated Rule Request – National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2011*, Minister for Energy and Resources, 8 December 2011.

[17] *Submission to the AEMC's Directions Paper (ERC0134)*, Department of Primary Industries, 16 April 2012.

4 Evidence and Recent Developments

The debate on related party contracting has been punctuated by regulatory determinations that take particular positions. In this section we look in more detail at a sample of determinations, examining how they have treated related party contracting.

A second category of relevant recent evidence is also reviewed here, being changes in the structure of related party contracts over time. These are discussed in section 4.2 below.

We have also considered the possibility that there may be tax advantages associated with using related parties. In general, there are two potential ways that external contracting, rather than self-supply, can deliver tax advantages.

- International transfer payments can allow firms to declare profits in low tax jurisdictions. However in this case both firms are registered in Australia, so there would seem to be no transfer pricing issues.

- Tax deferral through different balance dates. If the NSP has a balance date a few months earlier than the related contractor, expenses could potentially be accrued at the NSP's balance date, reducing its taxable profit. On the other side of the transaction, the related contractor would need to report the income, but tax would be deferred for a short period, and there would be a financing benefit associated with the deferral.

The second of these effects is potentially relevant, but the size of any effect would be quite small relative to contract size. For example, the expense might be one or perhaps two month's worth of payments, for a total value of $X. If tax on the income covering this expense was deferred for three months, the benefit would be less than 1% of X. The exact fraction would be 30% x WACC x ¼, where 30% is the company tax rate, WACC is the opportunity cost of capital for the firm and ¼ is the fraction of a year for which the payment is deferred.

4.1 Determinations on related party margins

It was suggested to us in consultation that the AER's 2010 determinations resulted in different outcomes for gas and electricity networks, even where related party arrangements were similar. In particular:

- In its gas decision, the AER permitted JGN to include in its opex forecasts enough to pay for activities that its related party contractor JAM undertook itself, but not for activities it subcontracted; but

- In its electricity draft decision, the AER declined both of the above components of the opex forecast.

The AER argued in response[18] that it used the same principles in both decisions, and that the differences arose from different facts rather than inconsistent application of a framework. In particular, it says that "the AER's decision to accept part of the margin in the JGN final decision was based on the consistency of the margin with the implicit margin arising from JAM's revealed costs".

This is a similar position to the more general one articulated by the AER in its submission to AEMC on the directions paper.[19]

> "this submission clarifies that the AER's proposal would require **consistency with the methods** determined to set the forecast in the preceding regulatory determination. The AER did not propose that there be **consistency with the amounts** of related party margins and the capitalisation of overheads specified in a preceding regulatory determination" (emphasis added).

Nevertheless, the AER did also acknowledge "differences in aspects of the approach to assessing outsourcing arrangements in the Victorian draft decision and the JGN final decision" and also that the Victorian draft decision approach differed from its treatment of ActewAGL's opex forecast where it accepted the full margin paid to JAM.

In its final Victorian electricity DNSP determination the AER further states that it[20]

- Maintains the approach used in its draft Victorian electricity determination; and
- "intends to consider this same approach in future regulatory determinations"

The outcomes for individual firms in the balance of this determination are of interest because they vary, and because the reasons for the variation can be found in the AER's determination.[21]

CitiPower

CitiPower proposed that some 76.5% of its total expenditure would be through related parties over the period 2011-15. It claimed a total of $55.6m in margins to be paid to these related parties, in excess of overheads, over this period. In support of its proposal, CitiPower presented:

- Argument that the contractors would have lower costs, so outsourcing is more efficient;

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[18] AER, Final decision, Victorian electricity distribution network service providers, Distribution Determination 2011-2015, October 2010, page 203.

[19] AER, Submission on AEMC Directions Paper, Economic regulation of Network Service Providers, April 2012, page iii.

[20] AER, Final decision, Victorian electricity distribution network service providers, Distribution Determination 2011-2015, October 2010, page 204.

[21] Discussion of the JAM determinations is omitted from what follows because large sections of the AER's determination have been redacted.

- A consultant's report that compared CitiPower's 2008 actual costs against a hypothetical cost estimated using the "stand-alone in-house" assumption; and
- A consultant's report that compared the related party contracts with the governance principles set down by the CitiPower board for transactions with related parties;
- An argument that the remuneration structure in the related party contract was of a fixed-cost type; and
- A claim that the actual historic costs incurred by the related parties were the basis for setting the future pricing.

The AER considered that the contracts did not pass its presumptive threshold test, and that the stand-alone in-house model was an inappropriate basis for comparison. The AER was not comforted by the fixed price structure for the contracts, noting that the size of any margin was largely independent of the contractor's efficiency incentive. The AER also considered that the proposal involved double counting of corporate costs. It rejected the entire claim for related party margins.

Powercor

Powercor proposed that 61.3% of its total expenditure would be through related parties over the period 2011-15. It claimed a total of $99.2m in margins to be paid to these related parties, in excess of overheads, over this period.

The lines of argument advanced by Powercor were essentially the same as those used by CitiPower, and the AER's views were also mirrored here. The same outcome occurred, being rejection of the entire claim for related party margins.

SP AusNet

SP AusNet proposed that 4% of its total expenditure would be through related parties over the period 2011-15. However it claimed no revenue for margins to be paid to these related parties.

SP AusNet argued that it, while all of its contracting parties are owned by Singapore Power, 49% of SP AusNet itself is listed on the stock exchange, so the firm has to comply with "strict corporate governance in relation to related party transactions". SP AusNet also argued that the position of the minority shareholders needs to be considered, which acts as a deterrent to the use of non-arm's length contracting terms.

The AER considered that SP AusNet had nevertheless failed to pass its presumptive threshold. However, since the firm was not claiming any related party margins, there was no material financial impact from this outcome.

United Energy

United Energy proposed that 8.6% of its total expenditure would be through related parties over the period 2011-15. However it claimed no revenue for margins to be paid to these related parties.

United Energy is ultimately 100% owned by UEDH, 34% of which is ultimately owned by Singapore Power, the balance being owned by DUET. Management, corporate and financial services are outsourced to UEDH. At the time of the draft determination there was also an operating services agreement with Jemena Asset Management (JAM) which is 100% owned by Singapore Power. In addition, there are contracts between United Energy and several other related parties. None of these contracts were subject to competitive tendering. The AER considered that its presumptive threshold was not passed by United Energy. However no related party margin issues arose.

United Energy's contracting arrangements have recently changed however and a range of functions have been subject to competitive tendering, in processes that were approved by the AER as passing its presumptive threshold test (see section 4.2 below for further discussion).

Summary

The outcomes described above lead to several predictions about the way the AER is likely to treat related party issues in future, in the event that rules do not change.

- The "presumptive threshold" applied by the AER will generally not be met when contracts are struck with related parties. The SP AusNet arrangements are the weakest (in ownership linkages) of the related party structures considered in the Victorian DNSP determinations, and the AER found this to still be too close a relationship for it to presume arms-length contracting. However the United Energy tendering process shows that sufficiently competitive tendering can indeed satisfy the presumptive threshold even when related parties are involved.

- Once the presumptive threshold is breached, it will be unusual for the AER to approve margins payable to related parties. No such margins have been allowed in any of these decisions.

- There will be a high evidentiary burden on NSPs that use related parties but do not conduct competitive tenders to demonstrate that their contracts are consistent with arm's-length terms. In particular, evidence will need to bear directly on the pricing terms and not be confined to generalised efficiency arguments, benchmarking, or comparisons against internal guidelines for dealing with related parties.

- Evidence that pricing is no greater than the NSP would achieve as a stand-alone entity performing all functions in-house will not be sufficient to demonstrate consistency with arm's-length contracting.

4.1.1 Other Evidence

The AER's 2010 Victorian electricity NSP determination contains some quantitative evidence on actual and proposed expenditure by service model. Figure 2 is drawn from that report and shows total expenditure aggregated across all NSPs. Two features are clear. First the use of related parties grew steadily over the first control period (2001-05) but may have peaked in the second control period (2006-10). The second observation is that total expenditure is forecast to increase in the third control period (2011-15) by something approaching 50% when compared to the recent past.

Figure 2: Total Expenditure by Victorian DNSPs by Service Model (Source: AER)

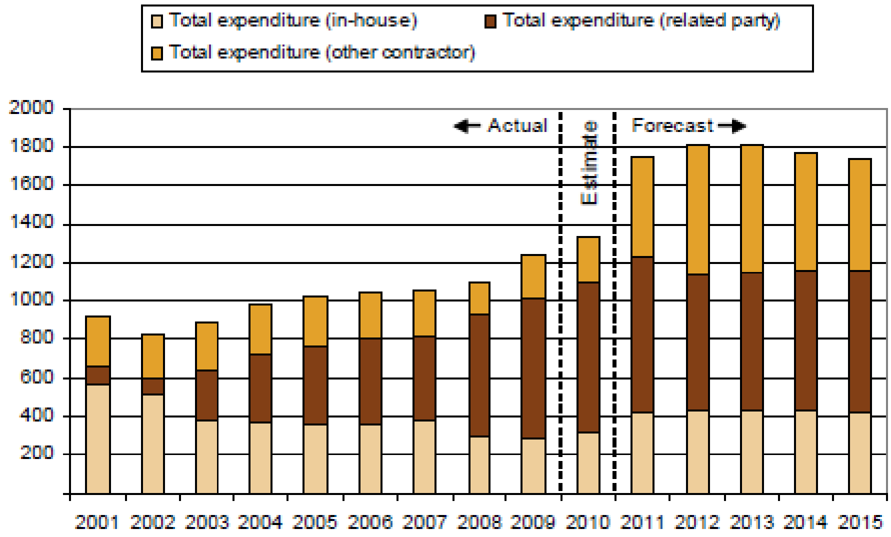
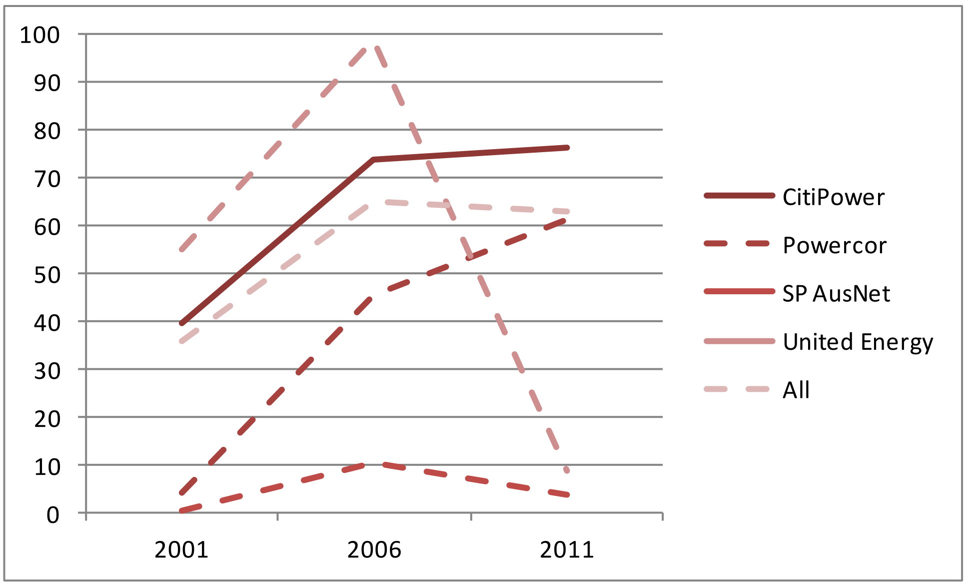


Figure 3 is compiled from data reported by the AER in its 2010 Victorian electricity DNSPs determination. It shows how the individual Victorian NSPs (except JEN for which data was redacted) have changed the share of their total expenditure on related parties. United Energy has made the most dramatic change, cutting this activity from almost 100% to less than 10%. SP AusNet, though never a large user of related parties, has also materially trimmed this activity.

Figure 3: Share of Total Expenditure on Related Parties by NSP and Regulatory Period



4.2 Recent Developments

Our review suggests that there is a general trend away from the use of related parties, though this is more apparent at some NSPs than others. We were informed of material changes that have either already occurred or are in progress at two NSPs, United Energy and Jemena.

United Energy

In United Energy's case, Figure 3 summarises the situation. We were told that the number of staff at United Energy grew by a multiple of 10 over the period 2003-2009, and by a further multiple of four since that time. The firm re-examined its contracts with JAM. A tender process was undertaken beginning in late 2009 following which it has split its network management contracts between two service providers (Tenex and JAM) and outsourced other functions (IT and customer relations) to different parties.

The AER examined United Energy's tendering processes and expressed the view that "the process adopted by United Energy appears reasonably competitive and involved a large number of applicants". However the AER also noted that this tendering process did not cover all of the components of United Energy's forecasts, and the AER rejected the total opex forecast.

Regulatory pressure on related party contracting was cited to us as a significant motivation for the changes to United Energy's business model that decreased the use of related parties.

Jemena

Jemena, through Jemena Asset Management (JAM) has been heavily involved in supplying outsourced services to other NSPs, including Jemena's 100% owned gas and electricity NSPs, JGN and JEN. In striking its own related party contracts (i.e. the JAM-JEN and JAM-JGN contracts) Jemena used a somewhat elaborate and well-documented process that sought to replicate arm's-length contracting. However these were effectively bilateral negotiations without competitive bids.

Jemena indicated that its asset management agreements (AMAs) have no fixed term, though they can obviously be renegotiated. Jemena also indicated that its AMAs are currently under review, and that current work is aimed at trimming their scope so that they only encompass construction and maintenance. The new service company (effectively a reformed version of JAM) will compete directly with other "tier one" contractors such as Transfield and Theiss.

This initiative is seen as a response to market evolution that has eroded the potential size of a full service contractor like JAM. The business environment is seen as more complex and requiring closer attention from in-house executives, to the point where more firms are preferring to in-source a significant amount of decision-making, design and management functions. One particular change, the smart metering programme in Victoria, was cited as indicative of this broader trend.

5 Analysis of Incentives

The primary concerns regarding related parties regard the effects of the use of related parties and the ability to roll related party margins into the RAB on the incentives of NSPs. This section presents our analysis of two incentive issues:

(a) The incentives of NSPs to engage related parties in the first place; and

(b) Given that an NSP uses a related party, whether there is a theoretical incentive to artificially inflate the margin when margins can be rolled into the RAB.

5.1 Incentives to engage related parties

The potential to achieve economies of scale and scope is a driver of the use of related parties by NSPs. Where a related party provides services to multiple NSPs, any fixed costs can be spread across a greater volume, leading to efficiencies. Permitting such structures and contracts to exist allows the market to determine the most efficient industry structure for providing various services.

Where fixed costs are proportionately large, there will be an incentive to exploit economies of scale through consolidation and this can be achieved in a relatively straightforward manner by contracting with a related party. During consultation, one NSP using related party structures told us that part of their motivation was that such a structure reduces the costs of absorbing a newly acquired network business.

5.2 Incentives for efficient pricing when related parties are used

Given that an NSP does use one or more related parties, a question arises as to whether and under what conditions there may be an incentive to artificially inflate the related party margin. To address this question we have developed a simple model and implemented the model numerically. The model is not intended to be fully realistic or reflect all possible scenarios. Rather the objective of the modelling is to illustrate the factors that affect the incentive for related party margins to be efficient.

The model is similar in nature to the numerical examples provided by the AER to illustrate the incentive to artificially inflate related party margins,[22] however we have simplified the model further to focus on the key trade-offs. In addition, the AER assume full overlap of ownership of the NSP and the related party, however we allow this to vary, to assess the range of ownership overlap at which related party relationships could be of concern. We also allow for greater flexibility in the treatment of related party margins by modelling the proportion of such margins that is allowed to be rolled in to the RAB.

In the model, we assume that an NSP uses a single related party, where some proportion of the related party is owned by the NSP's shareholders (between 0 and 100%). The related party is contracted to provide a service to the NSP and this contract embodies a margin of $10 million. In the year that the contract is struck, this margin is a

[22] *Response to AEMC queries on AER network regulation rule change proposals*, AER, 2 February 2012.

negative cash flow for the NSP and a positive cash flow for the related party. The net cash flow effect on the shareholders of the NSP depends on the extent of the ownership overlap between the NSP and the related party.

Some proportion (between 0 and 100%) of this margin is allowed to be rolled into the NSP's RAB at the end of the year in which the contract was struck.[23] This capitalised margin is then depreciated on a straight line basis over ten years. We assume the NSP earns a return on the capitalised margin based on a WACC of 13%. These returns are positive cash flows for the NSP.

This model relies on some simplifying assumptions and while these assumptions will affect the exact quantitative results, the qualitative conclusions will continue to hold. In particular, changing the value of the contract, the depreciation period and methodology, and the WACC will lead to different quantitative results, but in the alternative scenarios that we have tested, does not lead to qualitatively different results.

Table 1 illustrates an example of this model assuming the related party is 100% owned by the NSP's shareholders and 100% of the related party margin can be rolled into the NSP's RAB. In year 0, the NSP has a net cash flow of -$10m, offset by a corresponding positive cash flow for the related party, leading to a zero net cash flow for the NSP's shareholders. In subsequent years, the NSP receives positive cash flows from the margin that was capitalised into the RAB, where these cash flows decrease over time as the RAB is depreciated. Overall, the net present value to the shareholders of the NSP of this arrangement is $5.17 million over ten years. In other words, every dollar of related party margin that is rolled into the RAB generates positive cash flows of around 50 cents to the NSP's shareholders in NPV terms.

Table 1 Example model assuming 100% ownership overlap and 100% margin roll-in.

Year	0	1	2	3	4	5	6	7	8	9	10
NSP											
Opening RAB	0.00	10.00	9.00	8.00	7.00	6.00	5.00	4.00	3.00	2.00	1.00
Margin (capex)	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depreciation	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Return on RAB	0.00	1.30	1.17	1.04	0.91	0.78	0.65	0.52	0.39	0.26	0.13
Net cashflows	-10.00	1.30	1.17	1.04	0.91	0.78	0.65	0.52	0.39	0.26	0.13
Related Party											
Net cashflows	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NSP shareholders											
Net cashflows	0.00	1.30	1.17	1.04	0.91	0.78	0.65	0.52	0.39	0.26	0.13
NPV	**5.17**										

[23] Under current arrangements, 100% of the margin can be rolled into the RAB, but we allow for other possibilities that may arise under changes to the NER.

Table 2 illustrates the results if the ownership overlap is only 25%. In this case, the related party margin corresponds to a net cost to the NSP shareholders of $7.5 million in the year the contract is struck. This is not completely offset by returns to the capitalised margin, leading to a net negative net present value for the NSP shareholders. This example illustrates that any incentive to inflate related party margins will depend positively on the degree of ownership overlap.

Table 2 Example model assuming 25% ownership overlap and 100% margin roll-in.

Year	0	1	2	3	4	5	6	7	8	9	10
NSP											
Opening RAB	0.00	10.00	9.00	8.00	7.00	6.00	5.00	4.00	3.00	2.00	1.00
Margin (capex)	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depreciation	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Return on RAB	0.00	1.30	1.17	1.04	0.91	0.78	0.65	0.52	0.39	0.26	0.13
Net cashflows	-10.00	1.30	1.17	1.04	0.91	0.78	0.65	0.52	0.39	0.26	0.13
Related Party											
Net cashflows	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NSP shareholders											
Net cashflows	-7.50	1.30	1.17	1.04	0.91	0.78	0.65	0.52	0.39	0.26	0.13
NPV	**-1.84**										

Similarly, it is obvious that any incentive to inflate related party margins will depend on the proportion of the margin that is allowed to be rolled into the RAB. For any given level of the margin and degree of overlap, if a greater proportion of the margin can be rolled into the RAB, the positive cash flows that can be generated are greater.

Figure 4 shows the results of simulations conducted with this model for different combinations of the parameters representing the ownership overlap and the proportion of the related party margin that can be rolled into the RAB, given the other assumptions listed above. As expected, the cash flow to the NSP shareholders is positive if the ownership overlap and/or the proportion of margin recoverable is sufficiently high. If 100% of the margin can be rolled into the RAB, the NPV is positive when the ownership overlap is around 45% or greater. If only half of the margin can be rolled into the RAB, the NPV is positive if the ownership overlap is around 72% or greater.

Figure 4 Model simulation results.

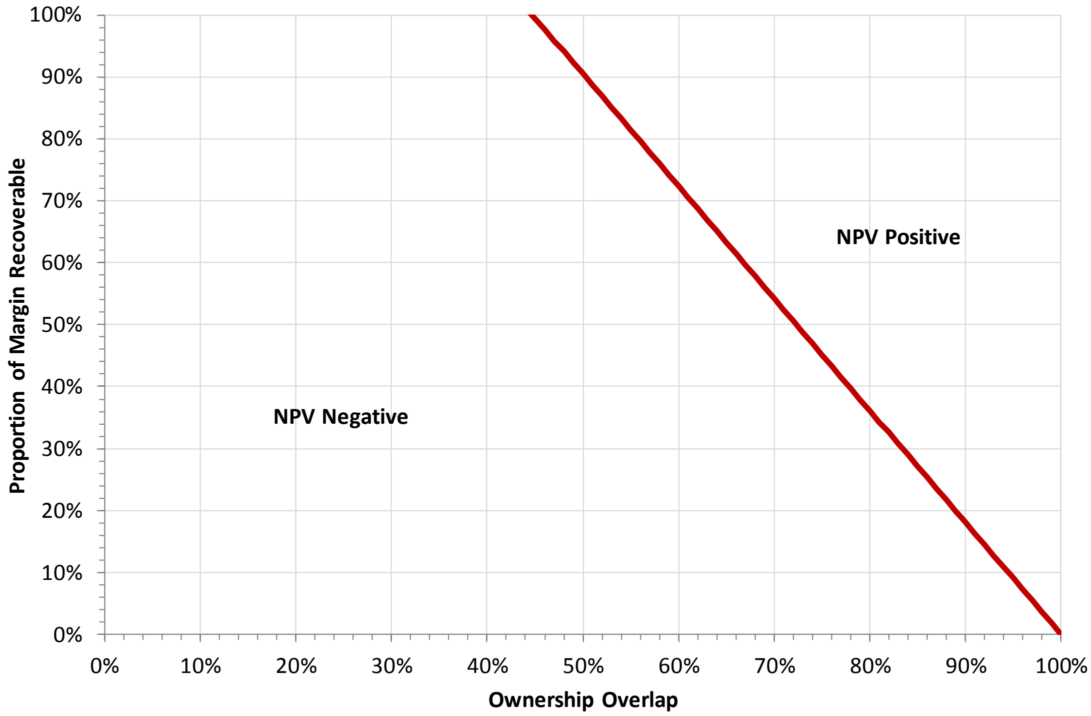
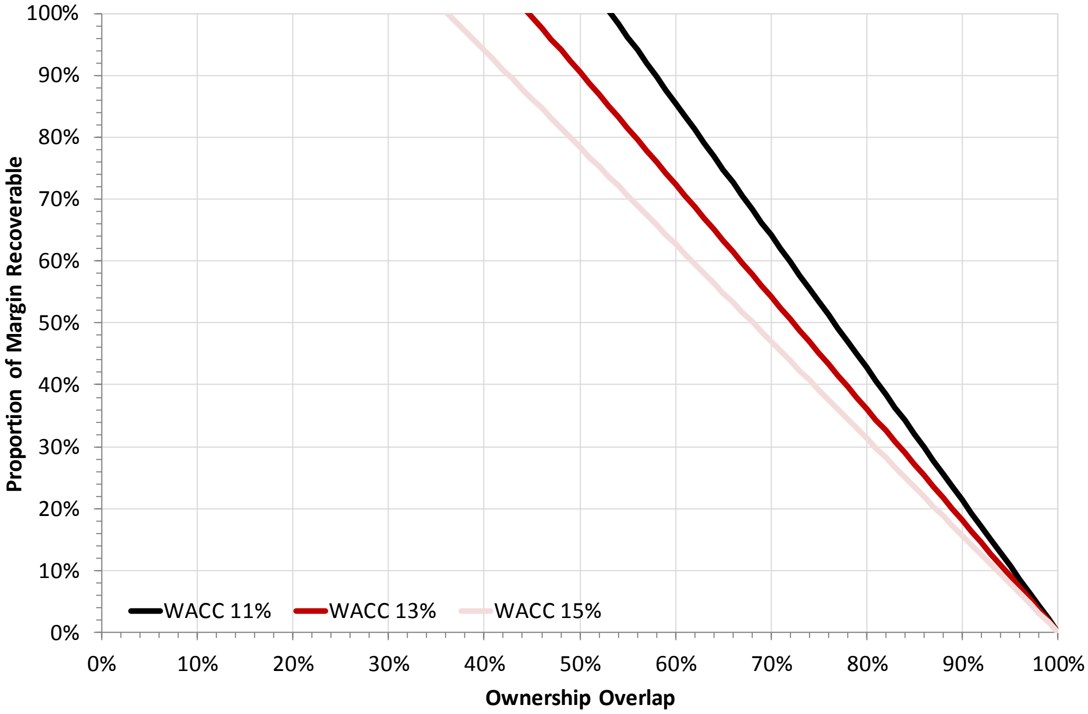


Figure 5 shows some additional numerical simulation results for different values of the WACC parameter. Higher WACC values expand the region in which the NPV is positive (because a greater return on the RAB is allowed) but the same qualitative conclusions continue to hold. Changing the assumed size of the related party margin scales the NPV results up or down but does not affect the position of the positive/negative frontier.

Figure 5 Additional simulation results for different WACC rates.



6 Conclusions

Based on the above analysis we agree that NSPs that engage related parties can have an incentive to over-inflate forecast costs, though our modelling suggests that this is not necessarily the case where the NSP owns less than 100% of the contractor.

We also note that cost inflation can occur in various ways. In particular, a firm that claims no margin payment for related party contracts might nevertheless still be paying inflated prices for the services provided. As a consequence, it is difficult to see that the AER can avoid close inspection of cost forecasts.

Our review of the history suggests that there is really only one material difference between the current position of the AER and the final position of the ESC. That relates to the counterfactual against which the costs in related party contracts are assessed: the ESC used a fully in-sourced stand-alone NSP as the counterfactual; the AER considers that an inappropriate standard.

While there is clear evidence that some firms are winding back related party contracting, it is perhaps too soon to conclude that this is a trend that will sweep the sector and eliminate related party contracting as a live regulatory issue.

Related to this, we consider that while there is some risk that recent regulatory practice may deter otherwise efficient outsourcing to related parties, there is no reliable evidence that this has occurred or is likely to occur.

It is certainly the case that the AER is able to, and does, closely investigate outsourced contracts and is quite capable of disallowing inappropriate margin claims at the outset of a regulatory period. The risk motivating the AER's rule change proposal is that the impact of related margins gets rolled into the RAB for the next regulatory period. In our view, an ex-post review of prudency and efficiency, looking back at the end of a regulatory period would provide an opportunity for the AER to mitigate this risk.