Third Party Access to Stand-alone Power Systems

Australian Energy Market Commission

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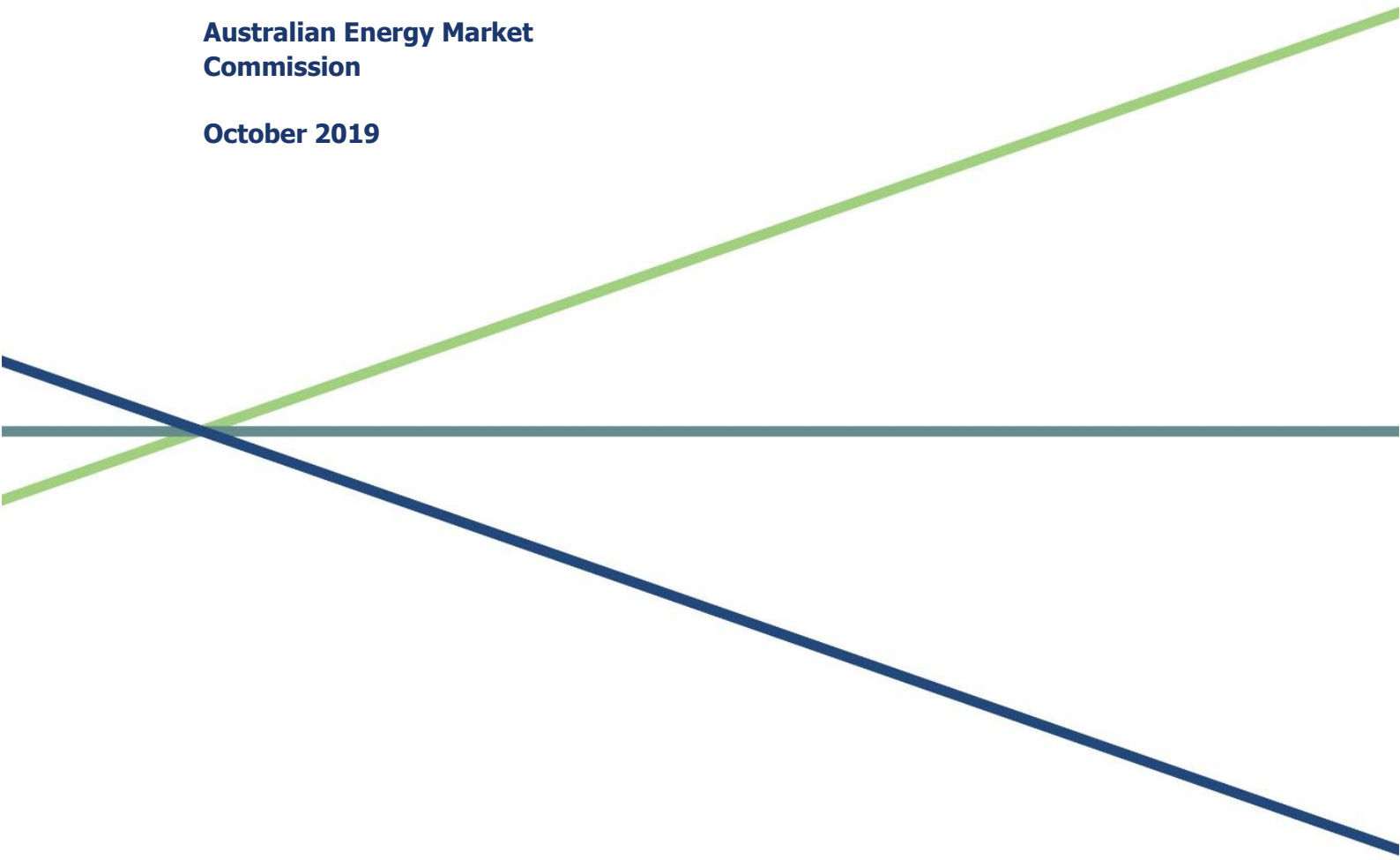

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1. Introduction and summary

1.1 Introduction

The Australian Energy Market Commission (AEMC) has asked Incenta Economic Consulting (Incenta) to advise on a test that can be applied to determine whether a third-party stand-alone power system (SAPS) should be subject to access requirements and price regulation under the National Electricity Rules (NER).

The AEMC has previously published a Draft Report for priority 2 of the review of the regulatory frameworks for stand-alone power systems.[1] The priority 2 issues relate mainly to SAPS that are owned by someone other than a distribution business (DNSP).[2] In its Draft Report the AEMC proposed three categories for third-party owned SAPS, namely:

- Category 1 – which are very large microgrids, and as such, are large enough to sustain competitive entry for generation and/or retail[3] and the costs associated with full price and access regulation of the network elements under the national regime.

- Category 2 – which range from those supplying smaller towns to those connecting more than a handful of customers. In this case competition and the full application of price regulation would not be feasible, however, given the SAPS owner will be a vertically integrated monopoly some jurisdictional level regulation will still be required.

- Category 3 – which are very small microgrids consisting of only a handful of customers. The focus of regulation in this case will be on customer protections as well as energy-specific safety requirements. These regulations would also be imposed through jurisdictional arrangements.

The focus of this analysis is whether a SAPS falls into category 1 or category 2. In considering the design of a coverage test to achieve this categorisation the Commission has asked us to give regard the following considerations:

- whether the microgrid is of sufficient scale to warrant the unbundling of services in order to support competitive markets upstream and/or downstream of the SAPS infrastructure

- whether the microgrid is of sufficient scale for the Australian Energy Regulator (AER) to be able to undertake a cost-effective regulatory determination, and

- more broadly, whether the microgrid is of sufficient scale that imposing an access regime would enhance economic efficiency and therefore be in the long-term interests of consumers.

We note that there are two types of regulation that are the main focus of this report. The first is access regulation. This is where the owner of bottleneck infrastructure, such as an electricity network, is required to provide access to its assets in order to facilitate either upstream or downstream

1 AEMC, 'Review of the regulatory frameworks for stand-alone power systems – priority 2, Draft report', 27 June 2019.

2 Priority 1 issues focused mainly on distributor owned SAPS and were addressed in a separate report.

3 We refer to generation and retail as the dependent markets in this report. The term reflects the fact that competition in these elements depends on gaining access to the network.

competition. In this case, competition for electricity generation (upstream) or retail services (downstream). The second is price regulation. The purpose of price regulation is to address the incentives the owner of monopoly infrastructure has to set inefficiently high prices for the use of its assets. It is important to note, as identified above, that irrespective of whether a SAPS is classified as category 1 or category 2, it is expected that some form of price regulation will apply as a means of addressing market power. As such, the central focus of the coverage test is more on the question of whether access to the electricity network should be provided to facilitate competition in the dependent markets.[4]

1.2 Summary of key findings

Our findings are as follows:

- The manner that SAPS are likely to emerge is important to the design of the test. We think is very unlikely that third-party SAPS will occur via a transfer from a distributor to another party or an embedded network severing connection to the grid. Instead, they are likely to be new developments, with these triggered by some major economic activity in an area remote from the existing network, or possibly as a result of a government policy. Some relevant features of new development SAPS are expected to be:
  - Materially higher uncertainty about the future level and longevity of demand compared to existing population centres, with associated stranded asset risk.
  - There will be a capacity for competitive tenders to be used to establish a SAPS and so harness the benefits of competitive rivalry to drive efficiency and have this reflected in prices. The effect of this is a right to supply SAPS customers.
  - Where feasible, long-term contracts may be a feature of new development SAPS as a means of managing stranded asset risk, but may not be possible in all cases.
- Category 1 and category 2 SAPS will each be subject to some form of price regulation.[5] This means that the misuse of market power is something that can be addressed whether a SAPS is covered or not. Therefore, the key focus of the coverage decision is whether third-party access should be mandated or not.

[4] We also assume that the regulatory regime applicable to category 2 SAPS would be tailored to suit the circumstances of a particular SAPS, noting that such SAPS could span a range of possible scales. For example, a negotiate / arbitrate or price monitoring regime could apply to a smaller SAPS, with a cost-based regulatory regime similar to what applies under the national regime reserved for the larger of the category 2 SAPS. Moreover, as discussed further in the report, the option exists for the category 2 regime to include some access-related elements, for example, a regime designed to promote retail-only competition (i.e., a "retail minus" regime similar to what applies to the Telstra telecommunications regime) or a regime to address limited access requests (e.g., a simple access regime to permit a large customer that owns its own generator to find a market for surplus output).

[5] Category 1 SAPS will be subject to the economic regulation provisions in the national rules, while category 2 SAPS will be regulated via state-based arrangements.

- The main function of third-party access would be to promote competition in generation and retail markets by means of 'gentailers'.[6] This can deliver benefits that promote the National Electricity Objective through the pressure competition places on market participants to operate and price efficiently. Coverage, however, also brings with it substantial direct and indirect costs. The direct costs relate mainly to requirements associated with the national regulatory regime, while the indirect costs, which we believe may be substantial, relate mainly to the risks mandated access may create for investment.

- Given the substantial costs associated with coverage, it is our view that the necessary pre-conditions for coverage to be imposed are that:

  – there is expected to be enduring effective competition[7] in the generation of electricity and this is expected to emerge within a reasonable timeframe, and

  – that a safety valve also be built into the regime to address cases where, notwithstanding the expectation of effective competition, coverage may be undesirable, with a specific focus in this regard on the circumstances of "greenfields" investments.

- We are proposing a new SAPS specific coverage test be applied. In designing this test we have drawn from features, or lessons, from the design and application of the national third-party access regime and the gas coverage test. The test has three distinct features, which are summarised here.

- *Test feature 1* – in general, a SAPS is to be covered, and classed as category 1, where:

  there is a reasonable prospect, within a reasonable timeframe, that effective competition will become established for the generation of electricity for all, or a substantial portion of, the supply of electricity to customers that are connected to, or that may connect to, the relevant SAPS, and

  coverage would not generate costs that would exceed the expected benefits.

  In deciding whether or not the SAPS coverage criteria are satisfied regard must be given to the national electricity objective.

  – The first criterion is essentially a threshold test of whether competition has the prospect of being sufficiently beneficial to warrant the costs associated with coverage.

  – The second criterion allows a residual test as to whether, notwithstanding that effective competition is expected, coverage is desirable. Similar to the gas coverage arrangements, this criterion is deliberately expressed in the negative, and so presumes coverage is desirable

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6 'Gentailers' are combined retail/generation entities. We consider that competition only in the retail sector is unlikely to deliver sufficient benefits to warrant coverage (and, for a generator to compete, it also must be able to access final customers, and so must also be a retailer or have the ability to negotiate with a retailer of its choice). Furthermore, if the creation of retail competition alone was the goal, it could be done through a lower-cost mechanism.

7 In this report we use the term 'effective competition' given it is the term used in section 18B of the National Electricity Law. However, for the avoidance of doubt, we consider that this term is interchangeable with the term 'workable competition'.

where competition up to the standard where effective competition is expected. We consider framing this as a negative test is appropriate given effective competition is a high threshold.[8] An important role of the residual cost-benefit test would be to allow recognition of the greater risk associated with "greenfields" developments – see test feature 3.

- *Test feature 2* – provides an exemption from coverage to accommodate the use of a competitive tendering process for the provision of SAPS infrastructure and to determine the associated terms (i.e., price and other matters). Specifically, that a new development SAPS could not be covered for a period of 15-years where it has been established through an approved competitive tender process. The approved tender process will mimic the arrangements, where relevant, in Part 5 of the National Gas Rules that relate to competitive tenders for gas pipelines.

  – The purpose of this feature is to ensure that the prospect of mandated access does not discourage (and possibly preclude) the use of competitive tenders, recognising that there is good reason to believe that coverage would be inferior to a competitive approach in terms of promoting efficiency.

- *Test feature 3* – provides a further exemption from coverage for new development SAPS, namely where a new SAPS would not be expected to pass the coverage test for an extended period of time, this finding could be locked-in prior to development for a 15 year period. This test feature recognises that even if the coverage test is not expected to be met (at least when applied prior to the SAPS being developed), in the absence of a binding upfront commitment an investor would be exposed to the risk that access subsequently may be mandated (and losses thereby suffered), which may adversely affect the initial investment decision. Therefore, a no-coverage decision will offer protection to SAPS investments that are not expected, prior to construction, to meet the coverage test. This approach is consistent to the arrangements for greenfield gas pipelines.

- We have also considered a number of procedural arrangements with the test. Our findings in this area are that:

  – an SAPS proponent, or project sponsor, has the option to obtain a decision on coverage prior to construction (for new development SAPS), or the sale of electricity (for transferred SAPS)

  – after this time, except where a no-coverage decision applies, it will remain open for anybody to apply for the coverage test to be applied, this includes for the potential revocation of coverage[9], and

  – while we do not have a firm view on who should make the decision on coverage, we consider it is important that the body is one that is able to make decisions that impact on jurisdictional

[8] The test for declaration in Part IIIA of the Competition and Consumer Act requires a positive cost-benefit test to be passed; however, criterion (a) (the equivalent to our competition threshold) only requires there to be promotion of a "material increase in competition", which is a lower hurdle than what we propose. The lower threshold in Part IIIA is appropriate given that there are few administrative and compliance costs that are a necessary consequence of declaration (Part IIIA is simply a negotiate-arbitrate regime), whereas substantial administrative and compliance costs would arise from a SAPS being classified as category 1.

[9] The need to revoke coverage may arise where, for instance, competitive entry initially occurred, but this entry ultimately proved to be unsuccessful. In this case it is likely to be in the interests of customers that the incumbent supplier is not exposed to the costs of coverage, in particular, the requirements of the national regulatory regime.

arrangements (recognising that a no-coverage decision implies category 2 regulation), understands both the benefits and limitations of competition, but also has sobriety as to the effectiveness of regulation, is preferably independent from any implications of the coverage decision, and has strong experience in economics, or the capability to draw on expert resources. A model that may meet these requirements is for the National Competition Council (NCC) to provide advice to relevant State Ministers to subsequently make the decision on coverage.

1.3 Structure of this report

The remainder of this report is structured as follows:

- Chapter 2 sets out our views on what are the likely consequences of applying coverage to SAPS, that is, what occurs with or without coverage, what are the expected costs and benefits of coverage and then what this implies for the design of a coverage test.

- Having regard to the discussion in Chapter 2, Chapter 3 sets out our proposed design of a coverage test and the justification for the design elements. In this chapter we also consider alternative coverage tests and procedural requirements associated with the test, such as when is the test applied and who applies it.

- There are two Appendices that provide additional detail on the expected scenarios for the establishment of potential category 1 SAPS and our assessment of alternative coverage tests.

2. Consequences from the application of coverage to category 1 SAPS

2.1 Introduction

The purpose of this chapter is to consider what is the effect of coverage on category 1 SAPS. We do this by first considering what we think coverage will do, and then consider what are the costs and benefits associated with coverage. In order to provide some context to our views, we also identify what we consider to be the expected scenarios in which SAPS capable of being classified as category 1 might emerge.

2.2 Expected scenarios for the creation of a category 1 SAPS

The conclusions reached in this chapter, and the remainder of the report, are highly dependent on the likely scenarios for the creation of a potential category 1 SAPS. We set out our thinking on the likely scenarios in more detail in Appendix A, however, in summary we consider the following likely outcomes for potential category 1 SAPS are relevant:

- To be considered for classification as category 1 the SAPS has to be sufficiently large to justify competitive entry into upstream and/or downstream markets. That is, the volume of demand must be enough to sustain more than one party selling electricity.[10] Further, entry of multiple parties should be likely, rather than merely theoretically possible, so that actual competition occurs in order to constrain potential market power.[11]

- Where competition is feasible, we expect this will emerge through a 'gentailer' model, namely a combined generation and retail entity that markets directly to customers accessing the monopoly network infrastructure. This is based on the following:

  – First, we do not think that the application of the national regime could be justified if the objective or expectation was that competition would emerge only in the retail component of the supply chain.[12] Much of the purpose of the national regime is directed to creating competition between generators, and a substantial part of the regime is to address the situation whereby there is a separation in responsibility for different parts of the physical supply chain. If there was an intention for competition to be created only in the retail component of the service, then this could be achieved for substantially lower cost compared to the national

10 We note that it is also feasible that embedded networks look to disconnect from the grid and become a stand-alone network. As discussed further in Appendix A, we consider that the size hurdle, amongst other things, means that these are unlikely to be prospective category 1 systems. That is, embedded networks tend to be shopping centres, caravan parks or commercial buildings. These types of networks are unlikely to have sufficient scale to justify the application of the NER framework.

11 We note that, depending on the nature of the market, the actual entry of a competitor or competitors may not be necessary to constrain market power. For instance, the threat of entry may provide a material constraint, noting this would still require that the conditions for actual entry exist. Alternatively, countervailing buyer power may also act to constrain the behaviour of a single supplier.

12 We note, in any event, that it would be unlikely that effective retail competition could be established under the national regime arrangements without effective generation competition. This is because a generator with market power could bid its energy into the electricity spot or contracting markets at a price that would effectively foreclose on the prospect of retail competition.

regime by requiring the incumbent to provide access to competing retailers for a "retail minus" access price.[13]

- Secondly, competition between generators of necessity requires those generators to be permitted to retail to final customers, which includes having the option of appointing a retail agent of their choice. This reflects the fact that if a generator is forced to use the incumbent as a retailer, then the incumbent could simply refuse to deal and so block the generator from entering. Accordingly, competition in generation requires competition in retail.

- Thirdly, as a parallel observation, we also think that it would be desirable to consider including additional flexibility in the wholesale market arrangements under the national regime so that a more fit-for-purpose set of arrangements could be applied to for category 1 SAPS. While we envisage that AEMO would continue to have a key role in relation to system operation for a category 1 SAPS, we would question whether it would make sense for the full NEM wholesale spot market arrangements to be applied. For other small-scale systems where competition in generation has been introduced, simpler arrangements have been employed, for example, requiring individual gentailers to remain in balance across their portfolio, and then contract for system wide balancing and other ancillary and system-security services. An example of this is the arrangements proposed for the North West Interconnected System in Western Australia, outlined in the box below. While such a market would impose physical obligations on participants, such bilateral arrangements would not be dissimilar to how most energy is financially traded in the NEM. The link back to the points above is that under some of the simplified wholesale market arrangements that could be envisaged (such as the NWIS arrangements), it may not be possible for a participant to enter the market as a retail-only participant.[14]

- There are significant hurdles associated with a transfer from a DSNP SAPS to a third-party SAPS such that it is likely that any third-party owned SAPS capable of being classified as category 1 will be a new development. Given the size required for the new development, it is likely to be subject to some form of overal coordination, either by the owner(s) of a major source of economic activity, or an existing or new government authority.

  - In this case it would be possible, and likely to be highly desirable, to run a process that harnesses competition for the market to simultaneously select the provider(s) of the infrastructure and also to determine the price at which the services are to be provided.

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13 A "retail minus" access price is one where the access price is set at the final price, less an allowance for the cost of the competitive component (in this case, the retail component). Such an access price would permit competing retailers to enter where their costs (including margin) were lower than the allowance (which may reflect the incumbent's cost). A "retail minus" regime has operated in relation to certain of Telstra's fixed-line telecommunications services for some time. For a SAPS, it may be beneficial for retail competition to be encouraged even where sustainable competition in generation is not feasible (for example, to promote sharing of retail costs across multiple utilities); however, the better (and much lower cost) means of facilitating this competition would be to introduce a simple retail minus access obligation as part of the category 2 regime.

14 Even under the national arrangements, it is unlikely in any event that competition in retail would be possible without competition in generation. While there would be a spot price that an independent retailer could, in principle, access and so enter the market, if the incumbent has a monopoly in generation then it could also set the spot price at a level that would foreclose entry by an independent retailer.

- New development SAPS are likely to have a materially higher level of uncertainty about the future level and longevity of demand compared to existing population centres. Consequently, given much of the infrastructure would be economically irreversible once committed, investors may be exposed to material stranded asset risk.

- Long-term contracting is likely to be a desirable feature for a new development SAPS as a means of managing the material stranded asset risk that exists. This will be most feasible where large customers can credibly commit to long-term purchase arrangements. It may involve contracting a single party to provide all of the infrastructure, or conversely, long-term contracts could be divided between several competing retail/generators. However, in circumstances where the SAPS comprise mainly small and medium size customers such contracting may be infeasible.

Box 1: Regulatory framework for the North West Interconnected Region

The regulatory arrangements that are being imposed for the North West Interconnected System (NWIS) in the Pilbara in Western Australia are informative for the scale that might be required for SAPS to justify the cost of regulation under the national regime.

The NWIS is already a system with multiple participants and a relatively large scale. Competition amongst the current gentailer providers is expected to occur. The system involves over 1,200km of network, four companies operating seven generation facilities. The system mainly services large mining operations, however, there are also around 15,000 residential and small to medium business accounts in the region.

In this case the Western Australian Government is currently undertaking a process to implement a regulatory regime that is 'lighter-handed' than the ex-ante regulation and wholesale market arrangements that apply in the larger South West Interconnected System (SWIS) which services Perth and surrounding areas.[15] This means that it was decided that this system is not large enough to warrant imposing the costs associated with the full wholesale market and economic regulation arrangements that apply to the bigger SWIS, but some robust access and regulatory arrangements remained necessary.

The light-handed regulatory regime that is being imposed is intended to facilitate competition and improve the efficiency of capital investment. Even though it is lighter-handed than the SWIS regime, it still contains substantial guidance on the setting of network prices and technical rules for the energy market. Its key features are:

- A negotiate / arbitrate price setting framework for networks with substantial transparency requirements (including for the network to conduct a transparent review of prices at periodic intervals). In setting prices a network business is required to apply the building block approach. This approach means independent oversight only occurs where a dispute arises.

- No formal energy spot market. Instead participants (i.e gentailers) are expected to match their generation with their consumption, and services of overall balancing, ancillary services and certain security services are to be purchased contractually from participants (and with the costs of these services intended, for the most part, to be spread evenly across the market as a whole).

15 The pricing and wholesale market arrangements in the SWIS, while different to what applies in the NEM, can be considered to be of comparable cost and scale to the NEM arrangements. That is, there is an extensive ex-ante price setting framework with substantial regulator involvement for networks and a wholesale market with detailed rules and oversight by a system operator.

AEMO would operate as an administrative system operator to assist with system security / ancillary service matters.

2.3 Regulation with or without coverage

In this section we identify what we expect to happen when the decision is made to cover a SAPS and so classify it as category 1. This requires also understanding what will happen without coverage in place. When coverage is not applied category 2 SAPS arrangements will apply, therefore, we first consider what these arrangements might look like in practice.

As identified earlier, the Commission intends that category 2 SAPS will be regulated by jurisdictional arrangements. This means that we cannot be certain about what approach will be taken to regulation given it depends what each jurisdiction decides to implement. Nevertheless, we know that in this case there will be no third-party access requirement. Meaning the SAPS provider will very likely be a vertically integrated entity.[16] As such, the expectation is that price regulation would apply to all parts of the supply chain, and not just networks and retail (for jurisdictions with default regulated retail tariffs in place). We would expect that price regulation will focus on a final delivered price for electricity, at least with respect to small customers, rather than a separate price being developed for each element of the supply chain.

It is likely that the approach to category 2 regulation will be scaled to the size and features of the relevant microgrid. That is, a 'one-size-fits-all' approach is unlikely to be appropriate given the broad range of potential SAPS that would fall into category 2. Instead, it would make sense for the "intrusiveness" of regulation to increase or decrease with the size and scale of the microgrid. For instance, a large category 2 SAPS may actually be subject to regulation that looks very similar to what would apply in the national regime, including the application of ex-ante price regulation set through the building blocks approach.[17] Alternatively, an approach similar to that adopted in the NWIS described above may be appropriate, depending on the nature of the customers. For smaller category 2 SAPS, or those that involve predominately well-resourced and sophisticated customers, a negotiate/arbitrate or price monitoring approach may be more suited.

Price regulation will also apply to SAPS classified as category 1; in this case implemented through the arrangements in the NER. Further, consistent with category 2 SAPS, we expect also at least some oversight of retail prices in a manner that is consistent with grid connected customers, although in this case the specific costs of the SAPS itself would need to be taken into account.[18]

Given a SAPS will be subject to price regulation irrespective of whether it is classed as category 1 or category 2, it is apparent that the main focus for the decision on coverage is whether or not third-party

16 It is our understanding that providing voluntary third-party access would not be precluded, however, it is not the expected scenario for category 2 SAPS.

17 We note that this does not imply that the entire process that exists for current distributors would be necessary for a category 2 SAPS. Indeed, for a relatively simple network with clearly identifiable customers and predictable demand it may be relatively straightforward to assess capital and operating expenditure requirements.

18 By implication, where genetailer models exist such oversight of prices at the retail level would have implications for the returns available for the generation of electricity.

access to the network assets of a SAPS should be required or not. The key functions of providing third-party access would be to:

- Promote competition in upstream and downstream markets. The objective here is to promote entry on equal terms from multiple providers, and so competitive rivalry for generation and retail services.

- Limit the ability for the incumbent SAPS provider to take advantage of its vertical integration in order to foreclose on competition. This type of regulation can require legal, accounting and/or functional separation of a vertically integrated entity to prevent it from leveraging its position as the owner of a bottleneck facility to the detriment of the entities it competes with in upstream and downstream markets. We note that comprehensive ring-fencing arrangements exist for distributors in the NEM for this purpose.

- Impose the national approach to price and service regulation for the electricity transport function, namely the network assets. As indicated, this may not differ materially to what might apply for larger category 2 systems.

2.4 Benefits and costs of coverage

Access and price regulation serve to address the costs caused by substantial market power that can be conferred on a party where there is no competition. However, regulation is far from perfect at achieving this goal. Therefore, it is important to take a realistic view about the extent of the efficiency losses (or customer losses) that would be remedied by coverage in view of the known costs and limitations of regulation. This section considers the likely costs and benefits of coverage for category 1 SAPS.

When considering the costs and benefits of access regulation, the National Electricity Objective (NEO) is instructive. In particular, it is clear that economic efficiency should be the overarching target, and that this efficiency should be for the benefit of the long-term interests of consumers. This framework ensures appropriate consideration is given the short-term benefits that might arise through lower prices to the longer term impacts on investment in services customers enjoy.

2.4.1 Benefits of coverage

As indicated above, the main function of coverage will be to require the SAPS owner to offer third-party access to its network, noting that price regulation will be a feature under both category 1 and category 2 regulation. This mandated access is required because the natural monopoly characteristics of the electricity network mean it cannot be efficiently duplicated. Therefore, access provides a means of achieving competition in upstream and downstream markets without incurring the inefficient cost of duplicating the network infrastructure. Regulatory intervention for third-party access is needed mostly in cases of vertical integration. This is because where the owner of the bottleneck facility is not competing in upstream or downstream markets it will usually have an incentive to promote use of its assets, and so competitive entry. Whereas, a vertically integrated entity may maximise profits by protecting its upstream or downstream activities from competition.

The main benefit of third-party access is to unlock the potential for competition. It is accepted within mainstream economics that one of the virtues of a competitive market is that there is pressure on market participants to operate and price efficiently. This means to reduce costs to efficient levels for a

level of service in a way that promotes the long-term interests of consumers. The motivation to lower cost and price efficiently can mean that firms are also motivated to innovate more than would be the case absent competition. This is because in a competitive market, where a provider is high cost, or raises prices above cost, customers will switch to alternative providers that are either lower cost or provide better service for a given price. It follows that, in general, the more competitive the market the closer prices will be to market cost and so better promote the NEO.

As noted above, in the context of a potential category 1 SAPS it is necessary that competition is both feasible and likely. If coverage is granted but there are no genuine alternative providers, or at least the threat of genuine providers entering, the behaviour of the incumbent will not be constrained in any meaningful way, particularly over the long-term, and so no benefits will result. Therefore, it is necessary that the market be capable of supporting at least more than one provider over a sustained period. This is likely to mean, in practice, that there is large enough current and enduring demand that multiple parties be capable of maintaining an expectation of a normal return.

2.4.2 Costs of coverage

Regulation has the potential to impose substantial direct and indirect costs on regulated firms, and also the broader economy. Where regulation is applied inappropriately the outcomes can be efficiency losses that are greater than those it is attempting to address such that the NEO is not promoted by this intervention. It is important to note also, that in the case of non-DNSP SAPS, all of these costs will be imposed on customers within the SAPS and cannot be shared more broadly with grid connected customers. These costs will also be dominated by fixed costs, with an implication that a SAPS is likely to need to be very large before such costs can be economically accommodated within the stand-alone system.

It is our view at a requirement for third-party access might impose the following direct costs:

- the costs associated with separating a vertically integrated incumbent
- new arrangements for the purchase and balancing of energy generation and consumption
- whatever additional administrative costs might exist to regulate prices and service under the NER relative to the jurisdictional based category 2 arrangements,[19] and
- new customer transfer arrangements to facilitate retail competition.

In addition, access can create costs that, while substantial, are less visible. We think that the most substantial indirect cost in the case of a potential category 1 SAPS is that the application of access regulation has the potential to increase the risk to the generation/retail component of the supply chain, and in turn, dissuade otherwise efficient investment. This risk can arise in two ways, which we discuss in turn.

[19] We note in this context, making this assessment of costs requires that the jurisdictional arrangements be known in advance of the assessment. Absent some prescription on particular jurisdictional arrangements the existence of national principles for regulating category 2 SAPS would be helpful in this respect as this may at least guide the forms of regulation that might be expected to apply in particular circumstances.

As we indicated above, there is likely to be a materially greater level of stranded asset risk associated with SAPS investments. This is a function of a greater level of demand uncertainty compared to established population centres and because the investments required are very large and would be economically irreversible once committed (i.e. economically sunk).[20] The presence of material stranded asset risk, in turn, poses several challenges for attracting investment in the necessary infrastructure.

The most significant risk, and indirect cost, of access regulation given the inherent risks of investing in SAPS is that that access regulation exposes the investor to the risk of entry. Entry into a SAPS could serve to undermine the costs and benefits of the initial investment. This is because expected demand would now need to be shared with other market participants, and the remaining demand may not be sufficient to provide a normal return on investment. This is a particular risk where alternative generator costs are falling, meaning less demand might be required to sustain a new generator relative to the incumbent. Faced with a risk that access regulation truncates returns, the prudent decision may be to not invest in the first place.

The application of mandated access is likely to make the prospect of using competitive tenders to establish a new development SAPS infeasible. Under a competitive tender the SAPS provider would receive a valuable right because (we expect) it would have a substantial degree of protection from competition. That is, the outcome of the competitive tender is the right to have exclusive access to customer demand, or a pre-determined portion of demand. Mandated access would undo that right such that wherever mandated access was a prospect it would likely deter the use of competitive tendering. The consequence of this is that competition would not be used to establish the price for the service, including any risk premia for stranded asset risk.[21]

The other more significant indirect cost that may emerge from coverage, and so third-party access, is a loss of coordination efficiencies. Under a vertically integrated market structure the service provider is able to optimise generation and network investment. When covered, the incumbent provider will need to plan and invest in the network to take account of investment decisions of others. This creates a risk that investment does not proceed in a manner that promotes the NEO.

Other indirect costs of coverage are those that are relevant to price regulation, and so may apply equally to category 1 or category 2 SAPS. These costs include:

- the prospect that regulatory error leads to under or over-compensation to the regulated business, and so distortions to either investment incentives or signals to use the services or assets

- the potential to alter decision making of the regulated firm so that productive efficiency is compromised, and

[20] A key difference for generation assets within a SAPS is that the demand that could be served is limited to the local area, given the development would not be connected to the grid.

[21] A particularly valuable role of competitive tendering is to place a value on the risk of asset stranding, as this would be imbedded in the price for the SAPS. While it is generally accepted in regulation that one solution to address the potential for stranded asset risk to deter investment is to provide explicit compensation for this risk, quantifying the value of this risk is difficult and there is little regulatory precedent to guide such a decision. As such, a competitive market process is likely to be far superior to finding an efficient value for this risk.

- the tendency to stifle innovation, which stems from the difficulty of dealing (within the framework of ex-ante cost-based regulation) with investments whose payoffs are uncertain, probably deferred, and potentially extend for a substantial period.

2.5 Implications for the coverage test

The discussion above highlighted that the costs associated with coverage are likely to be quite material. The most substantial costs are expected to be the indirect costs that put new investment at risk. However, the direct costs associated with regulation under the national regime should not be underestimated. These will require substantial ring-fencing arrangements, regulatory administration and compliance costs and also the establishment of arrangements to ensure the system remains in balance in the context of multiple, independent generators. The implication of this is that the benefits that derive from coverage need to be sufficiently large.

We think that the benefits of coverage are only likely to be large enough to compensate for the substantial costs of coverage when effective competition is expected to emerge from mandated access within a reasonable timeframe. That is, we do not consider the mere prospect of a material increase in competition is sufficient to warrant coverage. Instead, the competition expected must be vigorous enough that the material benefits of competition are likely to emerge. We also think that, except in unusual cases, the expectation that effective competition will emerge within a reasonable period should be sufficient to warrant coverage of the SAPS and hence application of the national regime.

It is our view also that, for coverage under the national regime to provide a net benefit, effective competition must be expected in the generation component of the supply chain. We say this for three reasons.

First, the benefits from competition in a particular segment of the supply chain to end-users will be, to a large extent,[22] related to the significance of the relevant segment in the overall cost of supply. The cost of generation is a material part of the supply chain, whereas the cost of the retail component is a much more modest component. We note, however, that for competition in generation to exist, generators must be able to deal directly with end-users, which of necessity means that competition will also occur in the retail segment.

Secondly, if the objective was to create competition in the retail function alone, then this could be done in a much more cost-effective way than imposing the national regime. Specifically, this could be done by requiring the vertically integrated incumbent to provide access to competing retailers under a "retail minus" access price. If desired, we assume that such an arrangement could be included as part of the category 2 arrangements.

Thirdly, we also suggest giving consideration to including more flexibility in the national regime to permit more fit-for-purpose wholesale market arrangements to be applied to SAPS (albeit with AEMO retaining a key role). Some of these options (such as the arrangements being considered for the NWIS) would not support retail-only competition.

[22] We observe, however, that other possible benefits from retail competition might be associated with innovation and technology, such as demand management, or innovative tariffs with smart meters.

However, there will be situations where the expectation of effective competition is not enough, on its own, to justify the application of the national regime to the SAPS.

The most important example of this is where the SAPS is a new development that faces substantial stranded asset risk, and where the additional risk imposed by the risk of access may deter investment, as discussed already above. Related to this, a second example is where the proponent of the SAPS seeks to run a competitive tender to deliver the SAPS infrastructure and simultaneously determine the terms of service provision (including price).

A third possible example is where effective competition may be expected to emerge between a number of small-scale generators, but where the overall demand served by the network in question remains modest. In this case, the administrative and compliance costs of applying the national regime may more than offset the expected benefits from competition (noting that there is a component of fixed cost to administrative and compliance costs), and it would not be in the long-term interests of consumers for coverage of the SAPS.[23]

Accordingly, it will be necessary for the coverage test to retain a degree of flexibility to address the specific circumstances of individual cases.

Based on this, it is our view that necessary pre-conditions for coverage to be imposed are that:

- there is expected to be enduring effective competition in the market that emerges within a reasonable timeframe, and

- that a safety valve also be built into the regime to address cases where, notwithstanding the expectation of effective competition, the coverage may be undesirable, and with a specific focus in this regard on the circumstances of "greenfields" investments.

[23] We observe that it may be possible for the Category 2 regime to facilitate access under more rudimentary (and hence low-cost) arrangements, and so provide an option for access seekers in situations whereby some increase in competition is expected (but not sufficient to warrant coverage under the national regime) or where the scale of the network is insufficient to warrant the national regime.

3. Proposed design and application of a coverage test

3.1 Introduction

The purpose of this chapter is to set out our views on the test for determining if a SAPS should be subject to the regulatory framework that is proposed to apply to category 1 SAPS, where this includes a requirement for third-party access and also regulation through the national framework for the network assets. We do this taking into account our views on the most likely scenario for the implementation of a potential category 1 SAPS, and also what we identified to be the benefits and costs of the proposed regulatory approach above.

In addition to the design of the test, we also consider procedural arrangements, such as what are the triggers for the test being applied and, where relevant, who should apply the test.

3.2 Proposed design

3.2.1 Overview

We propose the following test be applied to determine whether a SAPS should be classified as category 1 and the associated regulatory arrangements:

- *Test feature 1* – the general criteria for deciding whether a SAPS is to be classed as Category 1 system that we recommend are that:
  - There is a reasonable prospect, within a reasonable timeframe, that effective competition will emerge for the generation of electricity for customers who are connected, or may be connected in the future, to the SAPS,[24] and
  - Coverage would not generate costs that would exceed the expected benefits.
  - In deciding whether or not the SAPS coverage criteria are satisfied regard must be given to the national electricity objective.
- *Test feature 2* – An exception to coverage would exist where an approved tender process has been applied for the construction and operation of a new SAPS, in which the relevant SAPS would be precluded from being covered for a period of 15 years.
  - We propose that the tender approval process and requirements be consistent, where relevant, with the competitive tendering arrangements contained in Part 5 of the National Gas Rules.
- *Test feature 3* – A second option that would exist in relation to a new SAPS is a binding no-coverage ruling could be sought, in a similar manner to the no-coverage ruling that is permitted under the national gas regime. Specifically, if it is accepted that the test for coverage

[24] Note the earlier discussion indicated that we would expect competition to occur between combined retail/generation entities as we would not expect a wholesale spot market to be created for a SAPS (this mirrors how competition is expected under the arrangements currently being determined for the North West Interconnected System in WA). In this case, the retail and generation markets would not be severable.

would not be passed for the new SAPS, and is not reasonably expected to be passed for a period of 15-years from the commencement of the SAPS, then this no-coverage decision could be locked-in for that 15 years. One of the reasons as to why the coverage test may not be passed for a new development is because of the adverse effect on the threat of coverage may have on the incentive to make the initial investment.

3.2.2 Test feature 1 – Test for coverage

The general test we propose is that a SAPS would be classed as a category 1 system where:

- there is a reasonable prospect, within a reasonable timeframe, that effective competition will become established for the generation of electricity for all, or a substantial portion of, the supply of electricity to customers that are connected to, or that may connect to, the relevant SAPS, and
- coverage would not generate costs that would exceed the expected benefits.
- In deciding whether or not the SAPS coverage criteria are satisfied regard must be given to the national electricity objective.

The first of these criteria is essentially a threshold test of whether competition has the prospect of being sufficiently beneficial to warrant the costs associated with coverage. As indicated previously, it is our view that the minimum standard for this, given the expected costs of coverage, is effective competition, and that this be created in the generation component of the supply chain.[25] Therefore, we have chosen to reference this expressly in the test.

The first criterion refers to effective competition emerging within a reasonable timeframe. This reflects that effective competition may not exist at the outset of the SAPS, but instead may emerge over time. It is necessary that it emerge within a reasonable timeframe otherwise there is an increased chance that the costs of coverage would outweigh the benefits, given the benefits of competition are not fully realised until there is effective competition.

Another feature of the first criterion is that it refers to effective competition becoming established for all, or a substantial portion of, the supply of electricity to customers connected to, or that may connect to, the relevant SAPS. This is to acknowledge that different classes of customers of the SAPS may form economically distinct markets, and there may be a different level of competition for those different customer segments. For instance, there could be quite significant rivalry for large industrial or commercial customers (which may make up the bulk of total demand) and this may deliver material economic benefits. Conversely, there may be much less competition for small residential customers given the greater effort required to acquire such customers. Acknowledging this possibility means that the test can still pass through to the second limb, being the assessment of costs and benefits, without competition needing to be effective for every single customer in the SAPS.

[25] We note that it is possible that effective competition emerges only for certain segments of the market. For instance, competition may be stronger in relation to large industrial users, given the latter's capacity to agree to long-term supply arrangements than it is for smaller customers. The test that we envisage would require effective competition to be likely for at least a substantial part of the market, and for the second criterion to ensure that the benefits from facilitating competition to this subset of customers are sufficient to warrant coverage.

The test does not provide specifics on what effective competition might look like in practice. Not least, this is because there will be uncertainty as to what technologies might be available in the future and what level of scale is needed in order to make entry privately profitable. Further, it is not obvious how many participants are needed before effective competition exists. However, at a minimum, we would expect a decision maker to consider if there is sufficient demand in the market that would enable multiple parties to be able to expect to earn a normal return on investment over time.

The second criterion is focused on the question of whether, given that effective competition is feasible and reasonably expected to emerge, is coverage itself feasible, given the substantial costs associated with establishing a competitive market structure and regulations in accordance with the national framework. These are the costs of regulation that we identified in the previous chapter, and will need to be assessed against the counterfactual of category 2 regulation.[26] An implication of the two-part test being used here (i.e. a separate assessment of whether competition is feasible and whether the benefits of mandated access outweigh the costs) is that there may be a scenario where effective competitioneffective competition is likely, or access may actually occur on a voluntary basis, but the benefits from it are insufficient to warrant the additional costs of setting up formal energy trading/balancing arrangements and price and service regulation under the national framework.

The drafting of this criterion is deliberately expressed in the negative. The reason for this is that effective competitioneffective competition is a high threshold, and so it presumes that where effective competitioneffective competition exists that coverage is imposed. As such, in order for a no-coverage decision to be made it would be necessary to demonstrate that the that the costs exceed the benefits. The alternative would, instead, require that the benefits of competition be proven before coverage is applied.

We have chosen not to be specific as to what costs are considered, instead, the requirement that regard be given to the NEO is expected to play a role in directing the decision maker in this respect. In particular, we note that the NEO gives explicit reference to the promotion of efficient investment; which as we have discussed throughout this report, is likely to be a material factor in the consideration of costs. An alternative approach would be to mimic the arrangements of Part IIIA and explicitly direct the decision maker to have regard to the effect that coverage would have on investment. However, at this stage, we consider that this would only duplicate the specific provisions of the NEO and so not add any additional value.

For the avoidance of doubt, it is not our expectation that a quantitative cost benefit assessment of the costs and benefits of competitive entry be required, although this is not precluded. Instead, it would be appropriate for the decision maker to apply judgement on this matter. The reason for this is that the actual costs and benefits that will emerge are unknown and there is expected to be a high degree of estimation error. Therefore, it is not clear that requiring quantitative analysis would necessarily lead to the correct outcomes.

Comparison to national third-party access tests

We discuss in Appendix B how the precedents for similar tests have been drawn upon to inform this recommendation. This recommended test draws heavily upon both the test for declaration under Part IIIA of the Competition and Consumer Act, as follows:

[26] Which, as identified above, requires that these arrangements are known.

The structure of the test comprises a test of whether access is expected to promote competition in a dependent market, as well as a subsequent test of whether this is justified in terms of its likely costs and benefits. The principal changes that we have made are that:

- We have recommended a higher hurdle for competition be imposed, namely that effective competition be expected in the dependent market rather than just a promotion of a material increase in competition. We have recommended this because of the much higher administrative and compliance cost that necessarily will follow from coverage of a SAPS than is the case under declaration under Part IIIA.

- We have also recommended that the cost-benefit aspect of the test be applied as a negative test, which is a change to Part IIIA, but reflects the current coverage test for gas pipelines. We have done this to be consistent with the higher competition (discussed in the previous point) hurdle that we recommend. That is, if effective competition is expected within a reasonable timeframe, it is appropriate to have a presumption that coverage be warranted and require the evidence to rebut this.

The other changes that we recommend to the Part IIIA test are to:[27]

- lock-in aspects of the test where matters are knowable or reasonable assumptions can be made (i.e., the nature of the access services and dependent market(s) and that electricity networks have a natural monopoly technology), and

- narrow the residual cost-benefit test so that the test is applied against the requirements of the NEO rather than the broader and more nebulous concept of the public interest.

3.2.3 Test feature 2 – Exception for a competitively tendered SAPS

In circumstances where there is confidence that a competitive process has been followed for the establishment of the SAPS, the role for regulation is significantly reduced. Indeed, there is good reason to believe that regulation would be inferior to a competitive approach in terms of promoting efficiency.[28] Competitive tendering arrangements have been used to set pricing and other terms of service for several major infrastructure projects in Australia and elsewhere.

Mandated access would preclude the ability for competitive agreements to be struck. The function of the competitive tender is to provide the successful party with the right to exclusively construct the relevant assets and sell to the relevant customers. Mandating access in this circumstance would remove this right and open access to other suppliers, and in doing so remove the benefit from competitively tendering for the provision of services. Therefore, so that the benefits of competitive tendering can be maintained, the proposed coverage test would require that when an approved tender process has been undertaken that the relevant SAPS cannot be covered for a period of 15-years.

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27 Our recommended test also omits the national significance requirement as this was motivated more by jurisdictional concerns rather than economic issues, and has no obvious relevance to SAPS.

28 One of the particular benefits of using a competitive tendering process to set pricing and other terms of access is that the price that is delivered will automatically include any premia for stranded asset risk that is required to make investment commercial and that the investment is actually delivered, whilst also ensuring that the premium has been subject to competitive discipline.

The 15-year period for no-coverage has been chosen based on analysis of the Australian Competition and Consumer Commission (ACCC) that a government scheme for underwriting generators allow for up to 15-years of underwriting.[29] The rationale being that the ACCC would have assumed this is sufficient to motivate investment in generation. We have chosen a fixed period, rather than leaving this to the discretion of a decision maker, on the basis that fixing it will provide certainty over what period initial investors have to earn sufficient returns on their investment. Given we have chosen a fixed period, we felt it prudent to select the upper end of the range identified by the ACCC for generation investment underwriting. While the network will have a much longer economic life than 15-years, when covered, this investment will be subject to price regulation by the AER and a requirement for all access seekers to pay charges for these.

In order to ensure that competitive tenders undertaken in a robust and arms-length manner we recommend that the competitive tender process should require approval by a decision maker. We recommend that the same general arrangements that apply for competitive tender gas pipelines apply. These arrangements appear to focus on providing assurances of a proper process rather than the regulator taking a view on the outcomes reached from the process, which, given the expected uncertainty as to what might be a commercial return for a SAPS, is appropriate.

3.2.4 Test feature 3 – Provision for an up-front no-coverage ruling

As identified above, a major risk associated with the prospect of mandated access of potential category 1 SAPS is that it discourages otherwise efficient investment proceeding. The reason being that mandated third-party access would lead to demand/capacity being shared between competitors, and so may leave the incumbent with insufficient demand for it to earn a normal return on investment.

It is possible that there are scenarios whereby the test for coverage is not met, for instance because of the expected costs associated with the chilling effect mandated access can have on investment, and there is no prospect of the test being met for an extended period of time. However, absent other arrangements, once the SAPS is built an investor remains exposed to the risk that access is provided before it is reasonably able to recoup enough of its initial investment to make the project worthwhile. This is not a risk that the SAPS owner is able to manage post construction. Therefore, it creates the prospect that given this unmanageable risk that projects that would otherwise promote the NEO do not proceed.

We consider is reasonable, therefore, for a commitment to be made to prospective SAPS that would not pass the coverage test for an extended period of time that they are not exposed to the risk of access for a period of 15-years. The practical effect of this is that the SAPS will not be exposed to the risk of competitors taking customers the investor relies on in order to earn a normal return on investment. Further, the SAPS would remain under the category 2 regulatory arrangements rather than the national arrangements that are imposed under category 1 regulation, meaning that some form of regulation will nevertheless remain such that the interests of customers are protected absent competition.

The approach of granting a no-coverage decision in circumstances of new material investments is consistent with the arrangements taken for greenfield gas pipelines described earlier. In particular,

[29] ACCC, 'Restoring electricity affordability and Australia's competitive advantage Retail Electricity Pricing Inquiry—Final Report', June 2018, p.XIV.

when making its decision the National Competition Counsil (NCC) applies a 15-year time horizon as this is consistent with the duration of the no-coverage period.[30]

3.3 Alternative test options

3.3.1 Introduction

In developing our proposed coverage test for SAPS we considered a number of alternative options for the coverage test. The alternative options that we considered were:

- a purely quantitative criterion for determining coverage (e.g., based on the network size)
- a test that was framed more closely on the test in Part IIIA of the Competition and Consumer Act, and
- a test that was framed simply as an assessment of the costs and benefits of coverage.

Our reasons for not recommending these tests are set out below.

3.3.2 A quantitative test

The test that we have proposed (and the remaining options discussed in this section) requires a decision maker to make a decision against a set of criteria and to exercise a discretion in that process. An implication of this is that further decisions need to be made about the identity of the decision maker and the process that it should follow.

An alternative option that we considered would be for coverage to be determined based on a pre-defined threshold, such as a measure of the scale of the SAPS (for which a number of indicators would be possible, such as customer numbers, expected energy consumption, expected total demand, or some combination of these). A pre-determined threshold would have the advantage of being the most predictable of tests, as well as minimising administrative costs.

One of the largest uncertainties is the scale that would be needed before competition in the retail/generation component may be feasible. Whilst a view could be taken of this today, this would inherently reflect current technology and expected changes, which may prove to be materially incorrect.

A second uncertainty is that we can only speculate on what a candidate for a future category 1 SAPS may look like. As we discussed in chapter 2, we expect that these would be reasonably unusual – and hence idiosyncratic – developments. However, the nature of the development – and the composition of its customer base – will have a large bearing on the potential for competition. For example, effective competition will be more likely in a market that is comprised mainly of large and well-informed buyers that have the capacity to sign long-term contracts[31] than a market whose demand is dominated by small customers. Moreover, the feasibility of competition will also depend

30 NCC, 'Gas Guide, A guide to the functions and powers of the National Competition Council under the National Gas Law', October 2013, para 5.13.

31 The threat of competition in such a market would be expected to provide a powerful discipline on the offers of incumbent generators.

on the current contractual situation of customers, with new entry more likely as major contracts expire and need to be renewed, which is likely to change over time. In our view, it would be difficult to design quantitative criteria that take account of these matters.

Lastly, part of our proposal is to recognise the potential for access obligations to present a barrier to greenfields investment, the mechanism for which is to convince a decision-maker that access would be contrary to the NEO in that situation. However, it need not be the case the access would inappropriate in all greenfields situations, and requiring a decision maker to determine whether an "access holiday" is required addresses this potential. In contrast, if a purely quantitative test for coverage was applied then the exemptions would also need to be purely quantitative, which would also pose a risk of too many or too few exemptions being granted.

3.3.3 A modified version of Part IIIA of the Competition and Consumer Act

One alternative to our test would be to adopt more fully the structure of the Part IIIA test, so that the competition hurdle would be a lower one, and in parallel the residual cost-benefit test would be required to be applied as a positive test. Under this test, a SAPS would be classified as category 1 if:

- coverage was likely to promote a material increase in competition in the generation market, and
- evaluated against the NEO, coverage would generate benefits that exceed the expected costs.

Our principal concern with this framing of the coverage test is that it would not rule out coverage in many cases, and so:

- potentially lead to an excessive number of coverage applications
- leave the residual cost-benefit test with a substantial operation role (under our proposed test, this would be expected to have operation only in certain cases), and
- as a consequence of the last point, provide less certainty to participants about the hurdle for coverage than in the test that we have proposed.

Having said that, however, we have no reason to expect that expressing the coverage test in this manner would not result in appropriate coverage decisions.

3.3.4 A simple cost-benefit test

The final option that we considered was simply to express the coverage test as a cost-benefit test, following the structure of the test for regulation that exists in the Commerce Act (NZ).[32] This would result in a SAPS being covered if:

- evaluated against the NEO, coverage would generate benefits that exceed the expected costs.

[32] To be clear, this option follows the structure of the Commerce Act test rather than its provisions. The test in the Commerce Act is directed to a different purpose, namely whether to apply some form of price regulation rather than whether to mandate access by an already-price-regulated entity.

As with the previous test, our principal concern with this framing of the coverage test is that it would provide little guide as to which SAPS should be covered, and so lead to more uncertainty for participants and possibly higher administrative costs than the test that we have proposed.

However, as with the previous test, we have no reason to expect that expressing the coverage test in this manner would not result in appropriate coverage decisions.

3.4 Process for coverage

Given a discretionary test has been chosen, rather than some prescribed threshold, it means that a formal process will be needed to determine if coverage should be applied or not. The key matters to consider are:

- When is the test applied?
- Who can ask for the test to be applied?
- Who makes the decision?

We recommend that for all new SAPS, including new development SAPS and those transferred from a DNSP, that the project proponent or sponsor have the option to obtain a decision on coverage of the SAPS prior to construction or the sale of electricity to customers with the SAPS by a non-DNSP. Given the majority of new development SAPS are likely to fall well short of the threshold required for category 1 coverage making the test compulsory would likely add unnecessary cost. For those SAPS where a no-coverage decision is likely the project proponent should be sufficiently motivated to seek this decision that there is no need to compel the test to be applied.

Except in those cases where a no-coverage decision applies, we believe it should remain open for anybody to apply for the coverage test to be applied at any time. This mimics the arrangements for other third-party access regimes and accommodates a circumstance where a genuine competitor emerges but cannot gain access to the electricity network on fair and reasonable terms. This arrangement also accounts for the prospect that the economic circumstances for the SAPS changes after a no-coverage decision period ceases, for instance, where new agreements need to be reached with major customers but without the prospect of competition to discipline the price offer.

Another reason for the test to be applied at any point where there is not a current no-coverage decision is to permit revocation of coverage. This is to accommodate a scenario where the circumstances of the SAPS no longer permit that the benefits from competition outweigh the costs of delivering a competitive market framework and associated regulation. A circumstance where this could occur is where entry of a third-party initially occurred, but this business failed and exited the market, with no prospect of likely future entry. In this case, it may be more efficient to revert to category 2 regulation than to persist with the category 1 framework. We note, in particular, that category 1 regulation is expected to impose material ring-fencing arrangements on the incumbent. These arrangements would impose costly legal, accounting and functional separation requirements. These are not costs that would be efficiently incurred if it is not protecting any actual competition or promoting the threat of entry.

With regard to who makes the decision on coverage, we do not have a firm view on which body is the most appropriate. However, we consider that there are a number of factors that need to be taken into account when choosing the appropriate body or person:

- First, it needs to be recognised that the decision on coverage will have implications for jurisdictions outside of the national regime. That is, a decision of coverage or no-coverage will impact on whether the SAPS is regulated via the national regime or jurisdictional regimes. Therefore, it will be necessary that the body or person has sufficient authority to be able to allocate the function to jurisdictions, or remove it from them, as the case may be.

- Secondly, it is preferable that the decision on coverage be made by a party that understands both the benefits and limitations of competition in delivering efficient outcomes, but also has a healthy distrust of the effectiveness of regulation to replicate the outcomes of competitive markets. Coverage would see price regulation via category 2 arrangements for upstream and (potentially) downstream segments removed and replaced with competition. If the decision maker was pre-disposed to the merits of price regulation it may discourage them to promote the use of competitive markets.

- Thirdly, it is generally preferable that the decision maker is independent of the outcomes of the test. While this is not essential where robust decision making and appeals processes are in place, it is preferable that there is no perception of potential bias. Such perceptions may emerge where the decision has ongoing implications or obligations for the decision maker.

- Fourthly, the decision makers need to have strong experience in economics or the capability to draw on expert resources. The matters to be considered here are clearly economic issues and will involve a high degree of complexity. It is important that the decision makers, and their advisors, are well placed to understand and interpret the economic arguments before them.

In light of these considerations, it is our view that the NCC is perhaps best placed to apply the test but that the decision be made by a relevant jurisdictional Minister. We take this view because the NCC brings with it the necessary understanding of the costs and benefits of regulation, while a State Minister would have sufficient authority to be able to impose obligations on its state-based regulator or to promote the regulation of the SAPS to the national regime.

A. Scenarios for potential category 1 SAPS

A.1 Introduction

This Appendix expands on our views of the potential scenarios for the creation of a SAPS capable of being classified as category 1.

A third-party SAPS can develop in two ways, namely:

- transition from DNSP supply to third-party SAPS supply, or
- through an entirely new development.

The remainder of this section sets out our views on these potential pathways.

A.2 Transfer between DNSP to third-party SAPS

It is our opinion that the transfer of customers and assets from a DNSP to a third-party SAPS of sufficient size to be classed a category 1 SAPS is unlikely to ever arise. This is because there are advantages to customers from remaining with a DNSP provider, and also some significant hurdles before a transfer to a third-party provider can be done.

A DNSP owned SAPS has a number of advantages over a third-party provided SAPS. These are advantages that are not available when a third-party provides a SAPS. The implication being that a third-party SAPS needs to be able to outperform these advantages before customers would even consider switching from DNSP provision. These advantages are:

- Customers of the DNSP owned SAPS are able to retain whatever cross-subsidies are inherent in network tariffs and also share the cost of their own network upgrades with other customers outside of the SAPS. This is because a separate regulatory asset base will not be established for the SAPS. Instead, the costs of SAPS network assets will continue to be shared across all network customers.
- The cost of wholesale energy for SAPS providers will be set as an administrative charge to ensure that DNSP SAPS customers are at no disadvantage relative to customers connected to the main grid. This means that even where the cost of local generation is higher than grid connected energy, this cost will not be fully incurred by SAPS customers in isolation.
- The incumbent DNSP is likely to be able to draw on some economies of scale that come with the fact that it provides other network services in the jurisdiction. Although it is not clear how significant these will be, noting that a SAPS is expected to be remote from other facilities and staff that form part of the DNSP.

In addition to the advantages associated with DNSP provision that are not available to third-party SAPS providers, there are at least two other hurdles that exist before a SAPS could transfer from DNSP provision to a third-party, these are:

- A requirement that consent to switch to a third-party provider be sought from all customers. We consider this requirement would be particularly difficult to achieve for a third-party SAPS that might be large enough to be classified as category 1. This is because to be classified as category 1 it is likely that there will be a large customer base involved. As such, obtaining consent from all customers will not be straightforward. Indeed, even if there is a benefit to customers from the arrangement, it might be expected that other personal opinions on the arrangement can drive decisions for at least some customers.

- A requirement to compensate the DNSP for any stranded assets. While this may be a reasonable requirement, it also raises the cost of the third-party option relative to continued DNSP provision, recognising that this cost would fall only on the SAPS customers rather than the broader customer base of a DNSP. Again, given a potential category 1 SAPS would need to be reasonably large there is the prospect that there is also a material amount of compensation that would need to be provided to the DNSP.[33]

In addition to the matters identified above, we also consider that if there is an existing network owned and operated by a DNSP it is unclear why a third-party provider would be motivated to buy that off the DNSP and own and operate it itself. Doing so would require a party that is not currently a DNSP to become a DNSP, and so take on the burden of managing and maintaining a network that they did not build. Further, if the party is ordinarily a generator or retailer it would not be prevented from providing these services under a DNSP-led model. The most likely motivation would be to take advantage of vertical integration and the foreclosure of competition, which is something that can be removed via the coverage test.

Box 2: Embedded networks

Embedded networks represent a special case for where a SAPS might develop. This is because embedded networks are already private networks with assets that are owned, controlled and operated by the embedded network owner rather than a DNSP. However, embedded networks still remain connected to the main grid and so energy will be provided from grid supplied generators.[34] In this case severing the connection to the main grid would make the embedded network a SAPS.

It is our view that is very unlikely for an embedded network to be categorised as a category 1 SAPS. The main reason for this view is that it is unlikely for embedded networks to be of sufficient size to justify category 1 regulatory arrangements. As has been noted by the AEMC, common examples of embedded networks include shopping centres, retirement villages, apartment complexes and caravan parks. Imposing the NEM rules on systems of this size is clearly disproportionate to the benefit. Further, it is not obvious that there would ever be an embedded network of the size required to be a category 1 SAPS given such large network projects are more likely to have the network assets owned and operated by the distributor, noting that the network would be connected to the main grid.

In addition to the matter of size, most of the the factors above related to the transfer between a DNSP to a third-party SAPS are likely to be relevant for embedded networks. In particular,

[33] We note it is also possible that assets in remote areas are old (recognising that a SAPS is likely to be formed when network upgrade is considered) such that much of the costs of existing assets may already be recovered. The implication being that the size of compensation may not be material in all cases.

[34] We note it is common also for embedded networks to have stand-by generation that is available in the event of a grid outage. However, typically, these generators are high cost to operate and so are not feasible for long-term energy requirements.

customers would lose access to cross-subsidies inherent in network tariffs and would also likely face higher energy costs given they would no longer have access to grid-supplied generation or an administered energy price.

A.3 New development SAPS

Likely nature of a new SAPS development that could be Category 1

Given the hurdles associated with a transfer from a DNSP SAPS to a third-party SAPS it is likely that any third-party SAPS that is capable of being classified as category 1 would be a new development. More specifically, a new development that is both distant from the existing network (so that a SAPS is more efficient than grid connection) and sufficiently large to make competition in retail/generation both feasible and in customers' long-term interests.

While it is difficult to be anything more than speculative about the range of events that may give rise to a candidate SAPS, the more likely circumstances would appear to be:

- there is a large economic activity (like a major new mining venture) that would be expected also to spur associated economic activity and residential development, or
- while possibly less likely, there may be a government policy initiative that seeks to decentralise the population, which could involve subsidising economic activity in a remote area and possibly also implementing measures to encourage people to move to that development.

In all cases, we would assume that the new development (given its materiality) would be subject to some form of overall coordination, either by the owner(s) of the major source of economic activity (and possibly under the supervision of a government authority), or an existing or new government authority.

Difficulties with regulating new developments

Our expectation is that an important economic characteristic of such developments is likely to be a materially greater level of uncertainty about the future level and longevity of demand compared to the existing population centres. This greater demand uncertainty would, in turn, be expected to translate into material stranded asset risk in relation to the electricity infrastructure, given that much of this infrastructure would be economically irreversible once committed (i.e., is economically sunk).[35] The presence of material stranded asset risk, in turn, poses challenges for attracting investment in the necessary infrastructure.

In particular, the application of access regulation in this context has the potential to increase the risk to the generation/retail component of the supply chain, with the potential to dissuade investment.

- It is common where services provided by means of irreversible investments are supplied in unregulated markets that buyers and sellers enter into long-term contracts with fixed commitments, which is done to provide a more efficient allocation of risk (over which the buyer

[35] A key difference for the generation assets is that the demand that could be served would be limited to the local area, given that development would not be connected the grid.

often has a greater ability to influence) and to avoid either side engaging in ex-post opportunism.[36] In principle, such long-term contracts could be entered into between generators and SAPS customers – and so allow generators to manage risk – even if mandated access were to be imposed.

- However, the extent of long-term contracting between a SAPS generator and customers that is possible will depend upon the nature of those customers. Typically, it is only large customers that can credibly commit to long-term purchase arrangements. Thus, if the ultimate customer base is expected to be comprised mainly of small and medium sized customers, then it would be infeasible to use contracts between customers and generators to allow the latter to manage their risk. In such a case, even without mandated access, generators would face material risk (i.e., be exposed to the success of the market). Access regulation would then serve to enhance this risk (i.e., expose the generator to the risk of entry, for example, if generation costs fall substantially) and has the potential to deter investment.

Potential role of a competitive tendering process and implications for regulation

Where the SAPS relates to a new development that (we assume) is subject to some form of central coordination, then it is possible – and likely to be highly desirable – to run a process that harnesses *competition for the market* to simultaneously select the provider(s) of the infrastructure and also to determine the price at which the services are to be provided.

Competitive tendering arrangements such as this have been used to set the pricing and other terms of service in relation to a number of major infrastructure projects in Australia and elsewhere. One of the particular benefits of using a competitive tendering process to set the pricing and other terms of access is that the price that is delivered will automatically include any premia for stranded asset risk that is required to make the investment commercial and simultaneously ensure that the investment is actually delivered,[37] whilst also ensuring that this premium has been subject to a competitive discipline.

Importantly, we think that it would be desirable – and probably necessary – for the competitive tendering process to be applied to secure the investment in, and determine the price for, the price for the entire bundled service, that is, the combination of the network and retail/generation components. We think that combining all elements of the supply chain into a single tender is desirable because this will ensure that efficiencies from coordinating the different elements are obtained. We also think that it may be necessary to run a competitive tender for the whole of the supply chain because the financial success of any one of the different elements of the supply chain (principally the network and

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36 Ex post opportunism occurs when one party waits for the other to make irreversible investments, and then seeks a renegotiation of the terms of the deal (noting that, at that stage, the counterparty will have an incentive to continue to supply provided that only its forward-looking costs are covered).

37 It has also been widely accepted that the potential exists for cost-based regulation in the presence of material stranded asset risk to deter investment, and so substantial care is required to avoid this outcome. A deterrence of investment may occur if returns were expected to be capped at a "normal" level if the project is successful (i.e., the standard outcome of cost base regulation), but with the asset owner left with a loss if the project is unsuccessful – the expected (i.e., probability-weighted) return under these assumptions may be lower than the cost of capital, and hence the investment made uncommercial. Moreover, whilst it is also generally accepted that one solution to this potential for investment deterrence is to provide explicit compensation for the stranded asset risk, quantifying the value of this risk is difficult and there is little regulatory precedent to guide such a decision.

generation) is contingent upon the investments proceeding in the other elements. By allowing tenderers to bid for the whole of the project ensures that this risk can be managed and minimised.

A key issue for this report is how the imposition of mandated access may interact with the conduct of a competitive tendering process for the entirety of the SAPS infrastructure. Here we see that there may be two options.

- *Option 1* – it may be that the nature of future demand is such that the tender proponent (i.e., the planning entity) could offer retail/generators long-term contracts with the major customers. Whilst mandated access would expose the generators to risk over supply to the smaller customers, this risk would be manageable if the contracted load is sufficient. As part of the set of rights that the successful tenderer would obtain, a commitment could also be obtained with respect to the terms of supply to the non-contracted customers (e.g., a maximum price).

  – Indeed, it may be possible for long-term contracts to be divided between a number of competing retail/generators. This would ensure that a more competitive structure existed at the time the initial long-term contracts expired, and would also create more competition immediately in relation to the supply to the uncontracted customers.

- *Option 2* – alternatively, the nature of demand may be such that it is not feasible to offer the successful generator a long-term sales contract. In this case, if access were to be mandated, the tender process would not be able to offer the generator any material rights in relation to supply (i.e., the "successful" generator would be exposed to new entry) and so a tendering process could not be used to determine the price for the generation component. Moreover, as discussed in the section above, there is also the potential that mandated access in such a scenario may also dissuade investment in the generation component altogether.

  – In contrast, in the absence of mandated access, the "successful" generator under competitive tendering would receive a valuable right because (we expect) it would have a substantial degree of protection from competition (i.e., because any competitor would need to replicate the network component to supply customers, which would be unlikely). Thus, in the absence of mandated access, a competitive tendering process could be used to establish the price for the generation component.

Thus, we conclude that while there may be situations where the imposition of mandated access may be consistent with (and indeed enhance) the use of a competitive tendering process to deliver and determine the terms for the electricity infrastructure, there are situations where mandated access my preclude the use of this option to deliver the terms for the generation component.

Conclusions on the interaction between mandated access and new developments

From the discussion above, we draw two inferences for the desirability of applying mandated access to a SAPS that is created as part of a new development.

- First, as a general matter, it may be desirable (and possibly also necessary) to exclude mandated access for a period of time in order to enhance the incentives to investment in the generation component of a new SAPS development. This reflects the fact that the sort of new development that may qualify as a Category 1 SAPS may already be subject to substantial stranded asset risk,

and where increasing the risk (by enhancing the exposure of generators to competition) may dissuade investment.

- Secondly, it may be necessary to exclude mandated access for a period of time in some circumstances in order to permit a competitive tender to be used to by deliver the electricity infrastructure and determine the terms for the service. However, again, this may not be the case in all circumstances (e.g., where the proponent is able to offer long-term hedging contracts with a substantial share of the load as the right that the successful generators will receive).

B. Precedents for the coverage test

B.1 Precedents identified

We identified four precedents that we considered when forming our advice on the test to be applied to determine whether a SAPS should be covered and hence become a Category 1 facility:

- the test for declaration in Part IIIA of the Competition and Consumer Act, together with the very similar test in the Queensland Competition Authority Act
- the test for coverage of gas pipelines in the National Gas Law, and
- the test for deciding whether to apply regulation that is contained in the Commerce Act (NZ).

We provide our observations on each of these tests in turn below.

B.2 Part IIIA of the Competition and Consumer Act (Cth) and section 76 of the Queensland Competition Authority Act (Qld)

B.2.1 Precedent

The criteria for declaration under Part IIIA of the Competition and Consumer Act (Cth) are set out in section 44CA of that Act, and are as follows:

> (1) The ***declaration criteria*** for a service are:
>
> (a) that access (or increased access) to the service, on reasonable terms and conditions, as a result of a declaration of the service would promote a material increase in competition in at least one market (whether or not in Australia), other than the market for the service; and
>
> (b) that the facility that is used (or will be used) to provide the service could meet the total foreseeable demand in the market:
>
> (i) over the period for which the service would be declared; and
>
> (ii) at the least cost compared to any 2 or more facilities (which could include the first-mentioned facility); and
>
> (c) that the facility is of national significance, having regard to:
>
> (i) the size of the facility; or
>
> (ii) the importance of the facility to constitutional trade or commerce; or
>
> (iii) the importance of the facility to the national economy; and
>
> (d) that access (or increased access) to the service, on reasonable terms and conditions, as a result of a declaration of the service would promote the public interest.
>
> (2) For the purposes of paragraph (1)(b):
>
> (a) if the facility is currently at capacity, and it is reasonably possible to expand that capacity, have regard to the facility as if it had that expanded capacity; and

(b) without limiting paragraph (1)(b), the cost referred to in that paragraph includes all costs associated with having multiple users of the facility (including such costs that would be incurred if the service is declared).

(3) Without limiting the matters to which the Council may have regard for the purposes of section 44G, or the designated Minister may have regard for the purposes of section 44H, in considering whether paragraph (1)(d) of this section applies the Council or designated Minister must have regard to:

(a) the effect that declaring the service would have on investment in:

(i) infrastructure services; and

(ii) markets that depend on access to the service; and

(b) the administrative and compliance costs that would be incurred by the provider of the service if the service is declared.

The criteria for declaration under the Queensland provisions are, for the most part, identical or almost so, with the key difference being that criterion (c) ("national significance") has been replaced with an indicator of the significance to the State economy.

B.2.2 Meaning of the criteria

The criteria under both regimes require that:

- declaration of the service – and thereby access (or increased access) – be likely to promote competition in a related market
- the facility is what is referred to in economics as a natural monopoly technology, meaning that the lowest cost for society would be to use of the facility in question to supply the entire market, rather than multiple facilities
- the facility is of substantial size, with different measures applied, and
- as well as the above, declaration (and imposition of access) is in the public interest, with specific reference made to the effect on investment and the administrative costs of regulation.

Our observations about each of these criteria follow.

Criterion (a) – Promotion of competition

This criterion is applied by asking whether there will be a promotion of competition if declaration is imposed (and reasonable terms of access are imposed) compared to the counterfactual of there being no declaration. Both the "factual" and "counterfactual" reflect a projection of real-life, with or without declaration. As a consequence, the effect that the existing regime or voluntary access has on competition in the related market would be taken into account when deciding whether to declare the service.

Applying this criterion requires a number of matters to be established, including:

- a definition of the service(s) for which access is sought

- a definition of the dependent markets where competition is to be promoted, and

- to establish that the dependent market is a separate market to that of the service, which in practice means that the economies of scope between different parts of the supply chain cannot be so large as to make separation of parts of the supply chain economically infeasible.

In terms of the overall assessment of whether there is likely to be a promotion of competition, the guidance of the NCC is that this requires an assessment of whether declaration is likely to result in an improvement in the opportunities and environment for competition such that competitive outcomes are materially more likely to occur. As part of this assessment, some consideration include:

- whether the facility owner has market power in the market for the service and has an incentive to do things that have the effect of harming competition in the related market[38] – absent market power in the service, it has been found that a promotion of competition in the related market will not occur.

- whether the dependent is already workable competitive – where this is the case, improved access is unlikely to promote a material increase in competition.

Note that criterion (a) only requires that declaration promote a material increase in competition, it does not require declaration to be expected to result in workable or effective competition in the related market.

Criterion (b) –provision by a single provider is least-cost

As noted above, criterion (b) is a more technical matter, requiring it to be established that provision of the service by a single provider has a lower societal cost than multiple facilities. This criterion means that declaration is precluded except in cases where the technology in question is a natural monopoly technology.

Criterion (c) – of national or state significance

This criterion limits declaration except to those facilities that are sufficiently large to be of national or state significance.

Criterion (d) – declaration would promote the public interest

This criterion requires the decision maker, as well as being satisfied of the preceding factors, to make a positive assessment that declaration is in the public interest. The term "public interest" is a very broad concept, and so would invite consideration of a wide array of matters, although the decision maker is required to have regard to certain specific matters, namely:

- the effect of declaration on investment in the access service and in markets that use the access service, and

[38] There need not be an intent to deter competition in a related market. For example, the provider may have an incentive to charge prices that contain monopoly rents that has the effect of dampening competition in the related market (for example, by reducing the profitability in the related market and hence the incentive for entry).

- the administrative and compliance costs arising from declaration.

B.2.3 Our observations

There are three aspects of the test for declaration in Part IIIA where we consider changes are warranted for the context of SAPS.

First, Part IIIA has been drafted to apply potentially to a wide array of infrastructure activities, and so necessarily leaves a large number of matters to be determined during the declaration process. In contrast, many more aspects of the nature of SAPS and the nature of coverage can be foreshadowed in advance and assumed in the regime (thus reducing the task of the coverage decision maker). To this end, our view is that it may be assumed that:

- the service for which coverage is being sought is the provision of distribution services as defined in the NER
- the dependent market is the market for the retailing and/or generation of electricity in the vicinity of the relevant SAPS
- subject to the size of the SAPS, the market for the retailing and/or generation of electricity is a separate market from the market for distribution services, and
- the provision of distribution services is likely to be provided at lowest cost by a single facility rather than multiple facilities (i.e., that criterion (b) – the natural monopoly test – is met).

Secondly, as the policy intention of the AEMC is to apply coverage wherever the benefits from this exceed the cost when evaluated against the NEO, there is no reason for restricting coverage arbitrarily to SAPS that are either of national or state significance.

Thirdly, again, given the policy intention to have coverage apply when this is consistent with the NEO, it would be inappropriate for any residual "cost-benefit" assessment (i.e., requirement for the "cost benefit" assessment implied by criterion (d)) to be evaluated against a broad public interest criterion. Rather, the NEO would provide the more appropriate guide for such an evaluation.

The implication of the adjustments above would imply a coverage test for SAPS that would require coverage where:

- coverage was likely to promote a material increase in competition in the retail and/or generation market, and
- if benefits of applying coverage were expected to exceed the costs, evaluated against the NEO.

This is one of the options that we have considered and discussed in the body of the text. However, this is not our preferred option, for two reasons.

- First, we do not think the fact that there will be a "material increase in competition" is a sufficient minimum requirement for coverage. Unlike Part IIIA, which has little in the way of automatic administrative and compliance if declaration is granted, coverage of a SAPS will subject the network to the national electricity regime, which brings substantial administrative and compliance

costs. It is for this reason that we think coverage of a SAPS should be limited only to those situations where workable (or effective) competition is reasonably expected to emerge in the retail and/or generation market.[39]

- Secondly, given the application of the higher threshold before coverage can be applied as discussed in the previous point, our view is that it is appropriate to have the residual cost-benefit test applied in the negative – that is, by adopting a presumption that coverage would be appropriate if the modified criterion (a) is met, and so covering the services if the cost-benefit test is inconclusive. This version of the residual cost-benefit test draws on the coverage test for gas pipelines, which is discussed next.

B.3 Coverage test for gas pipelines

B.3.1 Precedent

The test for coverage of gas pipelines is as follows:[40]

15—Pipeline coverage criteria

The pipeline coverage criteria are—

(a) that access (or increased access) to pipeline services provided by means of the pipeline would promote a material increase in competition in at least 1 market (whether or not in Australia), other than the market for the pipeline services provided by means of the pipeline;

(b) that it would be uneconomic for anyone to develop another pipeline to provide the pipeline services provided by means of the pipeline;

(c) that access (or increased access) to the pipeline services provided by means of the pipeline can be provided without undue risk to human health or safety;

(d) that access (or increased access) to the pipeline services provided by means of the pipeline would not be contrary to the public interest.

…

100—Principles governing the making of a coverage determination or decision not to do so

(1) In deciding whether to make a coverage determination under this Division, the relevant Minister—

(a) must give effect to the pipeline coverage criteria; and

(b) in deciding whether or not the pipeline coverage criteria are satisfied in relation to the pipeline—

(i) must have regard to the national gas objective; and

(ii) must have regard to the coverage recommendation; …

39 As we note in the body of the report, the Part IIIA-like coverage test would still be expected to lead to the correct facilities being covered; however, compared to the test we propose, the broad "cost-benefit" test would be a more substantial part of the assessment, and hence make the task of the coverage decision maker more difficult.

40 Section 15 of the National Gas Law.

B.3.2 Meaning of the criteria[41]

The criteria for coverage of gas pipelines apply (with the deletion of the national significance qualifier and some minor alterations) the criteria for declaration that applied under Part IIIA prior to the recent amendments to the latter. The three difference of a substantial nature are as follows.

- *With and without access vs. declaration* – the gas coverage test asks whether access (i.e., providing a right to use the service) will promote competition rather than whether declaration will promote competition, which may deliver a materially different result where the facility is vertically separate and there is substantial access provided on a voluntary basis. The gas test is more likely to be found to promote competition in this vertically separate situation.[42]

- *Meaning of the uneconomic to duplicate test* – the gas test asks whether duplication of the facility is privately profitable rather than cost-minimising from a societal perspective.

- *Framing of the residual cost-benefit test* – the gas regime applies the residual cost benefit test as a negative test – a positive finding that coverage is not in the public interest is required to avoid coverage (and hence if this test is indeterminate, coverage applies).

B.3.3 Our observations

In relation to criterion (a), in the case of SAPS, we do not expect there to be material voluntary access in the absence of coverage given that the SAPS provider will be vertically integrated. Nevertheless, if there is voluntary access – or possibly rudimentary access obligations included in the category 2 regime as we suggest could occur in the text – we think it is appropriate to inquire as to whether the increase in competition consequent on coverage is likely to generate benefits that exceed the costs. For this reason, we prefer the specification of the test in Part IIIA.

In relation to criterion (b), our view is that the interpretation of the gas coverage criterion is bereft of economic merit, and should not be part of any assessment of whether a SAPS should be covered. Thus, we prefer the specification of the test in Part IIIA. However, as discussed above, we think it is appropriate to assume that the network element of any SAPS would have a natural monopoly technology and so, in the interests of reducing the complexity of the SAPS coverage test, advise not including this element in the SAPS test.

In relation to the residual cost-benefit test, as discussed in the previous section, our preferred option has the test framed as a negative criterion in the SAPS coverage test, replicating this aspect of the gas coverage test. Our view is that expressing the residual cost-benefit test as a negative criterion is justifiable given our recommended high minimum requirement for coverage implied by criterion (a), that is, that effective competition be expected to emerge. We further note that by expressing the test in the negative it is less likely to have an operation upon a coverage decision, which in turn would make

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41 We do not address criterion (c) (no undue risk to human health and safety) here. We assume that other regulation – including that applying under the national regime – would address this concern in relation to a SAPS that is deemed to be Category 1.

42 We observe, however, that the natural profit maximising behaviour of a vertically separate monopoly pipeline may have the effect of reducing competition even if that is not the pipeline's intention.

the coverage test more predictable (i.e., if effective competition is feasible in retail/generation then coverage would result, except where demonstrated that this would not pass a cost-benefit test).

B.4 Test for regulation under the Commerce Act (NZ)

B.4.1 Precedent

The test for regulation under the Commerce Act (NZ) is as follows:

> **52G When goods or services may be regulated**
>
> (1) Goods or services may be regulated under this Part only if—
>
> (a) the goods or services are supplied in a market where there is both—
>
> (i) little or no competition; and
>
> (ii) little or no likelihood of a substantial increase in competition; and
>
> (b) there is scope for the exercise of substantial market power in relation to the goods or services, taking into account the effectiveness of existing regulation or arrangements (including ownership arrangements); and
>
> (c) the benefits of regulating the goods or services in meeting the purpose of this Part materially exceed the costs of regulation.

B.4.2 Our Observations

The focus of the test in the New Zealand Commerce Act is upon whether there is sufficient market power to warrant some form of price regulation, rather than whether an already-regulated facility should be required to provide third party access. As a consequence, the actual criteria are not directly relevant to the design of the coverage test for SAPS.

That said, this provision is an example of a regulatory test that is simply framed as a cost-benefit test, and where those costs and benefits are to be evaluated by applying the general objective for the regime.[43] We have adopted this formulation as one of the options that we considered. However, this option is not our preferred option because, in our view, it would not provide sufficient guidance as to the likely outcome of the test. Our preferred test, in contrast, would imply that coverage would occur wherever effective competition in retail/generation is possible, unless there is evidence that demonstrates that this would not pass a cost-benefit test.

[43] The general objective in this instance is the purpose statement in section 52A, which can be paraphrased as promoting the long term outcomes of consumers by replicated the outcomes of competitive markets so as to achieve a list of desirable outcomes (such as cost efficiency, efficient investment and no undue monopoly rents).