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6. What factors affect the scope for inter-basin competition between gas producers in Eastern Australia? What are the circumstances in which such completion is viable and in which it is not viable? Provide examples.

The likely key determinants of inter-basin competition in Eastern Australia are:
- differences in supply development costs, including extraction and processing requirements, attributed to different basin geologies
- the size of the demand centres
- the distance between basins and demand centres
- the level of connectivity between supply and demand centres.

Jemena actively facilitates competition by connecting basins to supply zones. It is firmly in our interest to increase the number of gas basin supply options a gas user has. We are actively working to improve gas market interconnectivity, for example through projects such as our Wilton Interconnect. This project, currently under construction, will provide greater flexibility to market participants and improve interconnectivity by allowing the delivery of gas from the Eastern Gas Pipeline (EGP) into the Moomba to Sydney Pipeline for the first time.

We also continue to assess opportunities for greenfield pipeline development, which can also improve gas market interconnection and inter-basin competition, including the current North East Gas Interconnector project, which will connect the Northern Territory and east Australian gas markets for the first time. We also note that although such projects arise relatively infrequently given the size of the east Australian gas market, historically there has been strong competition between pipeline proponents for the development of such projects.
### 7. What are the key factors currently affecting the price of gas in Eastern Australia? Are current prices expected to be transitory or likely to be sustained? What information is most important to informing your view?

As has been well covered in public discourse, Jemena believes that the key factor driving significant upward pressure on the price of gas in eastern Australia is the recent linkage of a lower-priced domestic gas market to higher-priced international gas markets. This linkage has been facilitated by the establishment of liquefied natural gas (LNG) export terminals in Queensland. We note, however, that for most small (i.e. residential or small business) gas users across eastern Australia, the wholesale price of gas has a smaller impact on their end retail bills than other costs, particularly the cost of gas distribution.

In contrast to wholesale market changes, our proposed Jemena Gas Network (JGN) access arrangement for 2015-20 in NSW provides very significant downward pressure on gas prices for residential and commercial users of gas in NSW. We will lower our network charges for a typical residential customer by up to 34 per cent (or $137) in 2015/16, while for a typical commercial customer the reduction is nine per cent ($1,657). We estimate that our distribution network price reductions over the next five years will more than offset the anticipated wholesale gas price increases for residential customers. We also note that Independent Pricing and Regulatory Tribunal (IPART) has recently confirmed that the reduced JGN charges will contribute to a 7.3% decrease in the average regulated retail 2015/16 gas price for NSW residential customers.

Our proposed access arrangement includes a number of other initiatives which also respond to changing gas market dynamics and ensure the competitiveness of gas in NSW as a fuel of choice.

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<th>36. Is the further development of existing or additional facilitated trading markets likely to result in better outcomes for market participants? If so, how?</th>
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<td>Any future development of facilitated markets needs to be responsive to the needs of participants in those markets. These market participants should be the ones who ultimately bear the costs of any systems and infrastructure development, resourcing, and regulation. Additionally, given the differences between the risk profiles faced by pipeline owners and other gas market participants, other gas market participants are better placed to manage the additional risks associated with changes to market mechanisms. We consider that short term trading market (STTM) simplification, as flagged in the Australian Energy Market Commission’s (AEMC) East Coast Wholesale Gas Market and Pipeline Frameworks Review, may result in improved outcomes for market participants.</td>
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37. To what extent are international comparisons relevant to the supply of gas and associated services in Eastern Australia? Are there any lessons from reforms in the US, the EU or elsewhere that may be relevant for Australia? What reforms or measures adopted in the US or the EU are not likely to work in Eastern Australia, and why? Are there any intermediate trading models between the US/EU trading markets and bilateral contracting that could improve information flow and increase trading liquidity in Eastern Australia?

Direct international comparisons are problematic due to the comparatively small size of the east Australian gas market and a relatively low number of linkages between demand centres compared to Europe and the US. The Productivity Commission has recently observed that ‘Australia’s gas markets fundamentally differ from gas markets in the United States and Europe, which are more developed, more liquid and have many more buyers and sellers.3

We are committed to the ongoing development of our capacity trading service, however we remain open to exploring different options for trading models if they have the potential to materially improve the east Australian gas market. However, rigorous cost benefit analysis must inform any evolutionary changes to market models. It will also be important to have sufficient confidence regarding the level of demand in the market for the new services associated with any particular market models being assessed. Additionally, consideration must be given to existing long-term contractual arrangements between market participants, and any systems, administration, infrastructure and other relevant costs of new trading models incurred by pipeline operators that would need to be passed on to market participants.

Jemena notes that different market models are likely to be considered as part of stage two of the AEMC’s East Coast Wholesale Gas Market and Pipeline Frameworks Review, and we look forward to participating in this process.

40. Have users observed an increase in the price of pipeline services or deterioration in the terms on which pipeline services are provided? If so, to what extent is this due to increased concentration in ownership of transmission pipelines, decreased economic regulation or other factors? Provide specific examples of changes to prices/terms over the relevant period.

Jemena has negotiated parts of our standard terms and conditions with prospective shippers with the aim of differentiating our service offerings to the market (providing services that best meet shipper requirements), therefore reducing the uncertainty we face around retaining our shippers over the long-term. Shippers’ desires for increased flexibility, in particular the ability to vary the withdrawal and/or injection points specified in their agreements with us, is a growing trend in the market. This improved flexibility better enables shippers to optimise their portfolios and reduce fixed costs by trading with other market participants. Jemena considers all requests to vary receipt and/or delivery points under our gas transportation agreements, however we are not always able to accommodate such requests due to technical limitations of the pipeline (as explained further in our responses to question 47).

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41. With so few transmission pipelines now covered by economic regulation, does the threat of coverage still place a constraint on pipeline owners’ behaviour?

Commercial influences are the primary driver of our behaviour. We are incentivised to maximise the utilisation of our existing assets, as well as to invest in improvements to these assets which allow us to deliver improved services to shippers. However, we do view the prospect of coverage of our pipeline assets as a threat given the costs associated with economic regulation.

While our transmission pipelines are uncovered, we have voluntarily adopted some measures that are consistent with requirements of covered pipelines, including, for example, the publication of reference tariffs\(^4\) and standard terms and conditions\(^5\) on our website. We also maintain non-discriminatory access policies for the EGP\(^6\) and Queensland Gas Pipeline (QGP).\(^7\)

Jemena has not received any indications (either formally or informally) from any prospective or current shippers that they have given any consideration to seeking coverage of either of our pipelines. We believe this indicates that our pipeline access provisions and behaviour are acceptable to the market. However, in relation to commercial pressures, we do believe it is likely there have been instances where our shippers have investigated the potential expansion costs on alternative pipelines during the process of them considering future additional commitments to our assets.

42. Are pipelines being developed or enhanced to meet producer and shipper needs? Please provide examples of experiences in securing changes to pipelines to meet changes in supply and demand for gas.

Jemena continues to actively consider and invest in pipeline expansions and enhancements, as well as pursuing greenfield pipeline development opportunities.

The most recent QGP expansion project was completed in 2014, enhancing transmission and storage capacity and improving the resilience of the pipeline infrastructure. The $40 million project, which involved a new 35 kilometre duplicate section of pipeline and a new compressor station, increased the QGP’s capacity by seven per cent, allowing us to transport an additional 10 terajoules per day of firm capacity. This expansion was the second major project to increase the QGP’s transmission capacity in five years, after an investment of more than $100 million to double QGP’s capacity to 52 petajoules per annum was completed in 2010.

We also recently announced that we will expand the EGP’s capacity by around 20 per cent (an additional 22 petajoules per annum) to meet growing demand for natural gas in NSW and the ACT. This project involves the installation of two new midline compressor stations at East Gippsland and Michelago, plus additional delivery facilities. This expansion project represents an investment of over $100 million, and is due to be completed by the start of 2016. This particular project is supported by a new 15-year gas transportation agreement.

We are also currently constructing an interconnect between the EGP and the Moomba to Sydney Pipeline at Wilton in NSW, which will allow extra capacity to be delivered from the EGP into the Sydney STTM or the Moomba to Sydney Pipeline, improving the EGP’s utilisation at off-peak times and giving the pipeline’s shippers greater flexibility. We are also investigating opportunities for new pipeline developments, including having been invited by the Northern Territory Government to participate in the Request for Final Proposals stage in the North East Gas Interconnector project.

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\(^5\) Standard terms and conditions for the QGP are available at http://jemena.com.au/getattachment/e1180752-7993-4e9a-8252-a8551d8c55f1/Queensland-Gas-Pipeline-Terms-and-Conditions.aspx. Standard terms and conditions for the EGP are currently being reviewed as we develop our capacity trading platform, but are available upon request.


\(^7\) http://jemena.com.au/getattachment/02802f56-38f7-4ad1-b4f5-3560765a5fc43/Queensland-Gas-Pipeline-Access-Policy.aspx
43. Are pipeline services (including emerging hub facility service requirements in Wallumbilla) adequately evolving to meet user requirements? If not, explain which services are lacking on which pipelines and the effect of that on users.

We deliver a range of gas transmission and related services using our assets, and we face competitive pressures in providing these services. We have an incentive to maximise the revenue we earn from assets that have costs that are largely fixed, and therefore focus on retaining our existing shippers and attracting new shippers, with service innovation playing an important role in this. In particular, we aim to differentiate ourselves from competing pipeline companies by facilitating improved choice for market participants.

In the face of changing dynamics in the east Australian gas market, we continue to engage with all of our shippers and a range of potential shippers in relation to new services we may be able to provide. Accordingly, we consider and provide indicative proposals in response to requests for new services. However, there will always be instances where a service is unable to be provided without augmenting or otherwise physically modifying a pipeline, the cost of which would need to be recovered through the pricing of that service.

We are currently investigating the feasibility of providing as-available storage on the QGP, which may allow shippers to more actively participate in the Wallumbilla gas supply hub. However, we do note that the QGP has historically had a high and relatively flat physical utilisation rate, meaning the availability of these services may be limited.

44. Are there any restrictions or limitations on the supply of specific ancillary pipeline services that are affecting competition in the supply or acquisition of gas? Do restrictions or limitations vary by location or by pipeline owner?

Other than in instances where we are unable to provide a service using our existing infrastructure (and where a potential shipper has formed a view that the cost of the works required to provide that service render it uneconomic) or limitations such as facilitated market or hub requirements, we place no restrictions on the supply of any services, and it would clearly not be in our interest to do so.

45. Is the level of available information on gas flows sufficient to support competition across pipeline services? Provide any examples where timely availability of information on gas pipeline conditions would have influenced which pipeline was used to transport gas. What are the costs/barriers to providing more disaggregated information?

We have provided extensive commentary on this issue in submissions made to a number of recent reviews and consultation processes, including the AEMC’s East Coast Wholesale Gas Market and Pipeline Frameworks Review and the Council of Australian Governments (COAG) Energy Council’s gas transmission pipeline capacity trading work stream.

It is crucial, particularly in a small market with relatively few participants such as the east Australian gas market, that the costs and benefits of any proposal to improve market transparency are thoroughly considered. We provide daily forecast and historical flow data to the Australian Energy Market Operator (AEMO) for publication on the gas market bulletin board (BB). The granularity of this reported information (daily) aligns with the granularity of flow nominations our shippers must make in accessing services on our pipelines. We deliver gas to shippers on a daily basis, not hour-by-hour, and therefore the value or benefit that any market participant would derive from more granular flow data is, at best, unclear. Despite this, more granular and disaggregated flow data would increase costs for pipeline operators who would have to modify information reporting systems to comply with additional information provision requirements, as well as giving rise to potential issues around the publication of commercially-sensitive shipper information that could be detrimental to some large gas users’ competitiveness in other (non-gas) markets.

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8 The physical utilisation of the QGP does not tend to vary due to seasonal factors such as weather (in contrast to the EGP), as the vast proportion of the gas transported by the QGP is used by large industrial users. The largest single driver of utilisation on the QGP is changes to large customer usage patterns due to plant shut-downs and maintenance.
46. To what extent is the 15 year no-coverage determination (the so-called Greenfields Incentive), a useful driver of pipeline investment? To what extent is it a restriction on access to pipelines?

Jemena has not applied for a no-coverage determination in relation to the construction of a new pipeline. We consider that, in-principle, the Greenfields Incentive would encourage pipeline investment while striking an appropriate balance between reducing the risks faced by investors in greenfield pipeline projects (and therefore the cost of transporting gas, recognising the flow-on benefit this has for improving the economics of upstream supply development) and the ability of new shippers to access the pipeline during the 15 year period (given the coverage criteria considered by the National Competition Council in making such a determination).

However, we consider that in practice, the information disclosure requirements for the submission of a no-coverage application present a barrier for greenfield pipeline investors that operate in a competitive funding market to applying for the Greenfields Incentive.
47. Are there contractual terms and conditions in gas transportation contracts that are limiting competition in the supply of pipeline services (including secondary trading of capacity)? If so, explain what those terms are, the rationale for them and their effect on pipeline users.

We do not consider that there are any terms and conditions in our gas transportation agreements that limit competition in the supply of pipeline services, other than where the provision of services would compromise the safe and efficient operation of our assets in the interests of all shippers.

One issue which has previously been raised by some participants in previous market reviews and consultation processes is the effect of point-to-point transportation contracts (cited by some stakeholders as ‘restrictions on changes to delivery points’) on the trade of capacity. Our assets are designed, available capacity is calculated and services are priced based on the transportation of gas between receipt and delivery points which are specified in a shipper’s agreement with us. As recently noted by stakeholders during the AEMC’s East Coast Wholesale Gas Market and Pipeline Frameworks Review, this key feature of the contract carriage model has helped facilitate efficient investment in transmission assets.

Capacity trading is expressly permitted under our gas transportation agreements, however in some cases the buyer of secondary capacity may wish to have their gas delivered at a different point on the pipeline to that of the shipper they are buying capacity from. As the gas receipt and delivery points are specified in the gas transportation agreement, a shipper must make a request to us to vary the terms of the agreement.

Given the competitive pressures we face to attract and retain shippers, it is in our interest to facilitate any such requests from shippers where possible. A shipper who is willing to sell at least part of its firm capacity if it is no longer using that capacity may be less likely to reactivate its full existing capacity when its service expires. Accordingly, that shipper’s ability to on-sell its unused capacity to another shipper may reduce the recontracting risk over the longer-term for a pipeline owner.

However, it is not always technically possible to accommodate changes to shippers’ delivery points (whether for the purposes of capacity trading or otherwise). The longer the distance between receipt and delivery points on a pipeline, the more of that pipeline’s capacity is needed to transport gas to the delivery point. Because the capacity of a pipeline varies between sections or for different sets of point-to-point ‘paths’, changing one shipper’s delivery point may prevent us from providing enough capacity to meet other shippers’ firm transportation needs for their delivery points.

Using the EGP as an example, where gas flows north from Gippsland to Sydney, moving a shipper’s delivery point further north may result in there being insufficient capacity available to meet other shippers’ nominated delivery amounts in Sydney. In practice, there is no simple rule for determining the impact of delivery point changes, which is why we assess each request on a case-by-case basis. At all times, we must be able to ensure that we can safely meet our contractual obligations to deliver gas to all of our shippers with firm services at the points specified in their agreements with us, despite the desire of a shipper to vary their existing receipt and delivery points.

There have been instances where we have been both able and unable to accommodate requests for changes to delivery points. However it is important to note that in practice, many delivery points on pipelines (such as the EGP) serve multiple large gas users, meaning that changes to delivery points are not always necessary for parties wishing to trade capacity.
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<th>48. Are you aware of any instances where pipeline capacity was sought but not made available or alternatively not able to be procured in time? Provide details, including whether that capacity was sought from pipeline operators or shippers.</th>
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<td>There have been some instances where potential shippers have approached us to purchase transmission services that we have been unable to provide using our existing assets. In all such cases, we actively engage with interested shippers with a view to augmenting our assets to deliver services to them, which can include attempting to aggregate additional loads with other potential interested shippers to maximise the scale efficiency benefits of any augmentation project. For example, we were recently engaging with six parties who were interested in purchasing firm capacity on the QGP. However, the QGP is currently fully contracted and would therefore have required those shippers to support an expansion to access those services. In that case, the parties did not have sufficient certainty around their own projects to commit to such an expansion, so we were unable to provide services.</td>
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<th>49. To what extent are the new capacity listing platforms offered by APA and Jemena, or the current rule change proposal to the AEMC to enhance capacity information, likely to assist in the development of efficient capacity trading? If so, how?</th>
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<td>Since launching our capacity trading service on the QGP in December 2014, we have attempted to maximise the accessibility of our capacity trading service. The service is accessed through our website[^9] and we have proactively approached all our existing shippers about using it, in addition to other parties we considered may be interested. To date, no trades have been made using the service, and only one shipper has indicated some interest in using it. We are currently working to implement a similar service on the EGP by the end of 2015. Due to the more variable annual demand profile of users supplied by the EGP (in particular, Sydney gas demand), it is possible that there may be more market participants who may use this service. Anecdotal evidence suggests to us that a number of our shippers do trade secondary capacity through bi-lateral negotiations (and without notifying us). Our informal discussions with shippers indicate that they are generally content to continue to use bi-lateral trading arrangements without significant needs for capacity listing platforms and other services. Our shippers have, however, also stated that the prices charged for the use of capacity listing platforms do not present a barrier to their use. Regarding the COAG Energy Council’s enhanced capacity information rule change proposal, we support low-cost initiatives to improve market transparency and efficiency, but it is too early to comment on the likely effectiveness of the proposed rule change itself, given that the AEMC has indicated it will consider whether there are any further ‘information gaps’ within the scope of the proposal.</td>
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50. To what extent, or under what conditions, are the ‘as available services’ offered by pipeline operators a substitute for capacity trade entered into with a shipper? If not, provide reasons.

The extent to which as-available services and secondary (firm) capacity are substitute products from the perspective of a shipper will vary depending on that shipper’s circumstances and requirements.

On a fully-contracted pipeline, as-available capacity does not provide an up-front guarantee to the shipper that its gas can be flowed on any day. Instead, a shipper of as-available services will have any flow nomination it makes either confirmed or not confirmed by the pipeline operator just prior to the gas day. In contrast, ‘secondary’ firm capacity purchased from another shipper carries the highest level of priority (i.e. the trading of capacity has no impact on its priority).

The intended use of gas transported by a shipper is a key factor which will determine whether as-available services and secondary capacity are substitute products. If the end user of the gas is willing and able to bear the risk that there may be some days where they are unable to be scheduled for transportation, then as-available services may present a viable alternative to secondary firm capacity. Such a shipper may be an industrial gas user that is able to shut down operations on such peak days (although we note that some industrial users may not be able to do this).

For shippers that must have access to transportation services on peak days, as-available services would not be an effective substitute for entering into a capacity trade with another shipper. For example, the internal risk management policies of some gas retailers may limit their ability to rely solely on as-available services, in order to mitigate the risk that the retailer is unable to deliver sufficient gas to a distribution network to meet residential and small business customers’ demand. We also note the possibility that some gas supply agreements may require a buyer to maintain firm gas transportation services, so that the producer is assured of the buyer’s ability to transport gas away from the production facility.

51. How effective is competition between shippers and pipeline owners for the provision of contracted but unutilised capacity? If it is not effective, what factors are impeding competition?

Given the highly-variable degree of substitutability between as-available and secondary firm services depending on different shippers and their circumstances, we consider that the effectiveness of competition between shippers and pipeline owners for contracted but unutilised capacity is difficult to assess.

In relation to competition for the provision of secondary capacity, we have attempted to facilitate improvements through our capacity trading platform, but we note that our shippers generally appear comfortable to continue trading through bi-lateral negotiations and without our involvement, as discussed further in our response to question 49.

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10 Where no firm capacity is available for sale by the pipeline owner, as is currently the case for the EGP and QGP.

11 In practice on the EGP, this is likely to be restricted to a few critical peak days each winter.
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<th>Question</th>
<th>Answer</th>
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<tr>
<td><strong>52.</strong> Are the prices charged for capacity trades and ‘as available services’ what you would expect to observe in a workably competitive market?</td>
<td>Some participants in previous market reviews and consultation processes have raised questions around the pricing of as-available services, in particular why firm (primary) services may be priced at a level below that of as-available services. In the first instance, we note the difficulties making direct comparisons between the unit prices of these services, as we charge these services on different bases. We sell firm capacity on a take-or-pay basis (with a minimum contract period of one year), given that some of our pipelines (i.e. the EGP) can experience significant seasonal variation in demand. Shippers who purchase such services are therefore buying the right to nominate any amount of gas they wish, up to the maximum level specified in their contract. Conversely, our as-available services are charged on a delivered basis, meaning shippers only pay for the actual amount of capacity they require on any day. Despite this, and as noted in answers to other questions, it is strongly in our interest to encourage shippers to make long-term commitments to our pipelines, in order to reduce the revenue and recontracting risk that we face as an owner of highly capital-intensive, long-life fixed assets. The pricing of our firm services is one way we incentivise shippers to make such long-term commitments. Reducing uncertainty around our future cash flow is critical for us to be able to attract debt and equity funding at a comparatively low cost (compared to businesses in other sectors of the economy), which flows through to a lower tariff for shippers and ultimately the users of gas.</td>
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<td><strong>53.</strong> How should available pipeline capacity be measured?</td>
<td>The availability of (physical) pipeline capacity cannot simply be measured as the difference between the pipeline’s maximum capacity and the day’s flows—there is no single formulaic method of measuring available capacity. Available capacity can vary considerably according to a number of factors including the nominated receipts and deliveries on days before and after the gas day, ambient temperature, maintenance and other operational requirements. For example, we need to determine the level of available pipeline capacity when assessing whether requests for changes to delivery points can be accommodated, and we do so by undertaking detailed engineering assessments (including hydraulic modelling). This is explained further in our response to question 47.</td>
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<td><strong>54.</strong> Are there any provisions in gas transportation agreements which limit or impede effective capacity trading? What are those provisions and how do they work to limit or impede capacity trading?</td>
<td>See response to question 47.</td>
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<td><strong>60.</strong> Does the contract carriage model affect the level of upstream and/or downstream competition in the supply or acquisition of gas or other ancillary services (besides transportation services)? If so, how?</td>
<td>Although there is a higher level of competition in the Victorian retail gas market than other retail gas markets across east Australia, we consider that the most significant driver of this level of competition is the size and depth of the Victorian retail gas market itself. The penetration rate of gas connections and demand per customer are materially higher in Victoria than they are in, for example, NSW, where gas is generally a fuel-of-choice, rather than an essential service, for households. In addition to the greater size of the Victorian retail gas market, reforms made to it over the past two decades (including full retail price deregulation) may have also made a significant contribution to encouraging greater retail competition. In relation to upstream competition, the contract carriage model can encourage increased upstream competition by fostering competition for a demand centre between supply basins. We note that the ACCC is considering other factors impacting upstream competition as part of this Inquiry.</td>
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