

Minutes

Day Ahead Auction Project Team Meeting No. 9

Date/Time: Tuesday, 18 July 2017, 1.00pm to 5.00pm
Wednesday, 19 July 2017, 9.00am to 2.00pm

Location: AEMC Office, Level 6, 201 Elizabeth Street, Sydney

Attendees: *Project team*
John Jamieson, APA
Deidre McEntee, APLNG
Leon Devaney, Central Petroleum
Erin Bledsoe, Shell
Nicholas Pope, specialist technical advisor
Tom Walker, specialist technical advisor
Michael Handley, Origin (day 1)

GMRG
Daniela Moraes, analyst
Katherine Lowe, senior technical advisor
Sandra Gamble, facilitator

Guest
Amanda Seaton, JWS (day 1)

Apologies: Kevin Ly, Snowy Hydro
Andrew O'Farrell, Origin
Matt Sherwell, Santos
Jeff Cooke, SEAGas

Purpose: Auction product design.

Reference: DAA.9.20170718

	Agenda Item	Discussion	Actions	Decision/views
1	Recap on previous meeting	<ul style="list-style-type: none"> Some members suggested a few amendments to the minutes from meeting #8. Update on Standardisation group: recently analysed the issue of flexibility when using zones. Retained JWS to provide legal advice for the group. Update on Capacity trading platform (CTP) group: AEMO is currently developing a straw man of the capacity trading platform. The project team was informed that NERA has been selected as the consultant that will provide expert advice on auction design and that they will participate in the next meetings. The Energy Edge report presented on meeting #8 will be re-issued based on feedback from members of the group. 	<ul style="list-style-type: none"> Circulate draft of Operational GTA when available. Circulate minutes from meeting #8 with the suggested amendments. Circulate re-issued Energy Edge report when available. 	
2	Update from COAG Energy Council and implications for auction	<ul style="list-style-type: none"> The COAG Energy Council met on the 14 July. The Council agreed that AEMO will be the operator of the capacity trading platform and the day-ahead auction platform. The Council directed the GMRG to ensure the information disclosure and commercial arbitration rules commence by 1 August 2017 (instead of 1 September). The Council also tasked SCO to report by the end of the year on further regulatory options to strengthen pipeline regulation. It is not clear what this work will cover, but it is likely to have an impact on the AEMC's review of parts 8-12 of the NGR. 	<ul style="list-style-type: none"> GMRG to add to parking lot: <ul style="list-style-type: none"> - Cost recovery of the auction needs further consideration. - How the Gas Supply Guarantee (for gas fired generation) will impact in the day-ahead auction (DAA). - Consider whether the Australian Domestic Gas Security Mechanism could have implications to the DAA. 	
3	Legal and governance arrangements required for the auction	<p>Amanda Seaton (JWS) presented on how the overall legal architecture is expected to work for both the CTP and DAA:</p> <ul style="list-style-type: none"> The team noted the hierarchy of the governance framework: law, regulations, rules, 	<ul style="list-style-type: none"> Amanda (JWS) to create a list of the issues that need to be captured somewhere in the governance arrangements. Circulate an amended version of the diagram, 	<ul style="list-style-type: none">

	Agenda Item	Discussion	Actions	Decision/views
		<p>procedures, guidelines and agreements.</p> <ul style="list-style-type: none"> - National Gas Rules: the AEMC is responsible for making the rule changes. The AER is responsible for enforcing the rules. - Procedures: AEMO is responsible for making procedures and also changing them. However, AEMO needs to apply the NGO (National Gas Objective) when considering such changes and follow a consultation process. - Guidelines: Are created for specific cases. - Agreements: Are contracts with standard terms and conditions, with regulatory oversight and contractual force. <ul style="list-style-type: none"> • The team discussed the diagram on the pipeline capacity trading architecture (Appendix A) and the tables on the governance framework for the capacity trading platform and day-ahead auction (Appendix B). • The group examined the issue of prudential requirements for the CTP product and the DAA product and the need to keep separate prudential requirements from each other, with the aim to minimise credit risk in the market. • The team noted that two separate agreements will be created: one for the day-ahead capacity market (between AEMO and shippers) and one operational GTA for the secondary trading of capacity (between shippers and the service provider which will be used for both CTP and auction products): <ul style="list-style-type: none"> - It was mentioned that the Operational GTA should be sufficiently broad so that standard T&Cs would always be made available first, and bespoke pipeline 	<p>as discussed during the meeting.</p> <ul style="list-style-type: none"> • Prepare a timeline for the development of draft law and rule changes, AEMO procedures and agreements and the design and implementation of IT systems. • GMRG to add to the parking lot: <ul style="list-style-type: none"> - Where should renominations right sit: in the law or the rules? - What would be the process to change an auction product? 	

	Agenda Item	Discussion	Actions	Decision/views
		<p>specific T&Cs would only be included if required.</p> <ul style="list-style-type: none"> - The group discussed that different governance arrangements will be required for each agreement, and that the decision on who should be the decision maker has not been made yet. The options discussed were AEMO, the AEMC, the AER. Other options could include a Reliability Panel, style decision making panel, Advisory panel, etc. The Standardisation PT will be considering the matter. • The group briefly discussed curtailment order. It was mentioned that the curtailment order may be based on the bid stack and that regulatory oversight by the AER might be required. • It has not been decided yet if the rule changes for the day ahead auction will come from the Ministers or the AEMC. • All the rule changes required to implement the day-ahead auction will be written after the December 2017 COAG EC meeting and consultation is likely to occur by early 2018. The CTP and DAA are expected to be operational for the summer 2018/19. • It was noted that procedures are usually written, and the IT systems developed, after the law and rules are published. 		
4	Break	N/A	N/A	N/A
5	Product design options to be taken forward and calculation of auction quantity	<ul style="list-style-type: none"> • The team debated the table with 4 product design options, including firm, as available, interruptible and hybrid (Appendix C) and discussed which options should be taken forward for consultation in September. • The issue of which pipelines will be covered by the DAA will also go for consultation in September. • The group then discussed the charts on how to calculate the auction quantity under each option. It was noted that the 	<ul style="list-style-type: none"> • GMRG to add to the parking lot: <ul style="list-style-type: none"> - How to deal with park & loan services? 	<ul style="list-style-type: none"> • The group was informed that the firm auction option does not comply with the AEMC required recommendations and consequently won't go for consultation. • The group decided that options 2 (as available) and 4 (hybrid of firm and interruptible) should be taken forward for consultation, with

	Agenda Item	Discussion	Actions	Decision/views
		<p>top down approach maximised the auction quantity, to the extent that there is spare operational capacity available.</p> <ul style="list-style-type: none"> • One team member suggested that it is likely that as available and interruptible capacity products would end up disappearing once you start trading the auction product. • Another member stated that the pricing mechanism is important in order to have demand for the auction product. • The group discussed park & loan services. One member explained that park & loan are scheduled after scheduled flow capacity, and it is usually not 1 to 1 in all pipelines because flow capacity and park & loan are physically different. There are firm and interruptible park & loan services. 		option 3 (interruptible) to also be included, time permitting.
6	Break for the day	N/A	N/A	N/A
7	Recap on previous day	N/A	N/A	N/A
8	Evaluation criteria to use when assessing options	<ul style="list-style-type: none"> • Tom Walker (AEMC) explained what the National Gas Objective (NGO) is and how it should be applied to the day-ahead auction options being assessed by this project team: <ul style="list-style-type: none"> - He explained that economic efficiency can take form in three different ways: allocative, productive and dynamic and that are usually trade-offs between them. He also noted that the long-term interest of consumers is an important component of the NGO. - The group noted that the day-ahead auction is trying to achieve allocative efficiency, by helping with: reducing transaction costs, hoarding of capacity, monopoly pricing and coordination efforts (through the combinatorial auction). 	<ul style="list-style-type: none"> • Tom Walker to break down how to apply the NGO when assessing the DAA options. 	

	Agenda Item	Discussion	Actions	Decision/views
		<ul style="list-style-type: none"> • The team also debated to what extent the auction would impact on investment efficiency: <ul style="list-style-type: none"> - One member stated that if the DAA is introduced on pipelines that are not fully contracted, that could affect the ability of the pipeline to contract spare capacity. - Another member noted that investment efficiency is not only about pipeline investment, but also investment in other parts of the value chain (supply/producers, consumers). - The group was reminded that the concept of fairness is not part of the NGO. 		
9	Auction arrangements	<ul style="list-style-type: none"> • Nick Pope (AEMO) presented an overview of the auction process, settlement and prudential arrangements: <ul style="list-style-type: none"> - AEMO proposed to deliver the DAA by cloning the Settlement Residue auction (SRA) system and processes. - Discussed clearing mechanism: clearing price with a single round on each pipeline. Nick also went through an example for a combinatorial bid. - The team also discussed the option of pay as bid; however a new settlement mechanism would need to be developed, because it is not part of the native functionality of the SRA (more complex). - Noted AEMO's intention to leverage the existing GSH settlement system, reports and processes for the DAA settlement and discussed the benefits of having a centralised settlement. CTP would also be combined with the DAA and GSH settlement (netting of settlement amounts). - Credit risk management was also discussed. It was noted that because the auction is only for a day- 	<ul style="list-style-type: none"> • GMRG to circulate presentation slides. • GMRG to add to parking lot: <ul style="list-style-type: none"> - AEMO to look into the legal framework in order to have a single invoice. - AEMO will investigate the use of the GBB data interface to facilitate the required data transfers. STTM interface is an alternative. - How to trade imbalances if the auction product is not used often by the buying shipper? In-pipe trading, listing service, MOS stack? - How will the revenue be allocated to the various pipeline sections of a combinatorial auction? 	

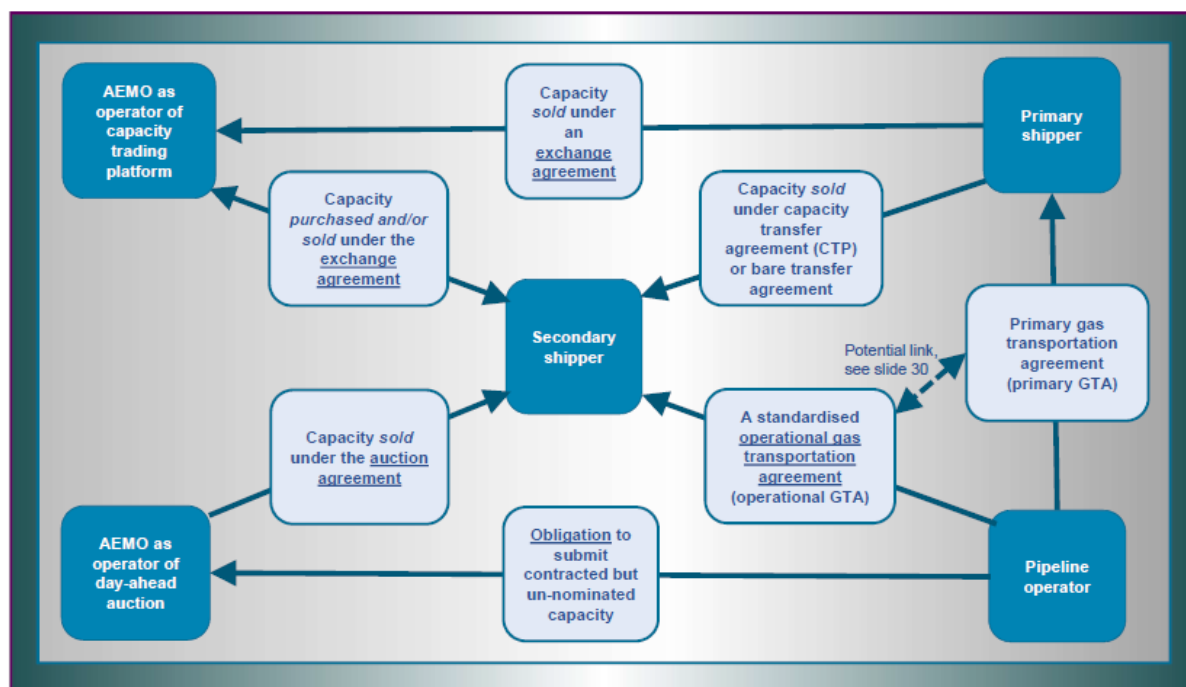
	Agenda Item	Discussion	Actions	Decision/views
		<p>ahead product, buyers are not able to build up liabilities over extended periods.</p> <ul style="list-style-type: none"> The group noted that the auction expert (NERA) will look into the SRA system/process to evaluate if it is fit for purpose. 		
10	Break	N/A	N/A	N/A
11	Timing of the auction	<ul style="list-style-type: none"> The team examined the need for harmonisation of nomination times and gas day start in order for the DAA to be functional: <ul style="list-style-type: none"> It was noted that the rule change on Gas Day Harmonisation published by the AEMC in February 2017, and to be implemented by 1 April 2021 only covers facilitated markets (STTMs, GSHs and DWGM) and does not cover other pipelines, shippers and producers that don't participate in these markets. Team members noted that the only way for the gas day harmonisation to cover all participants in the East Coast gas market would be through a Law change. One member stated that it would be very messy to have one asset (i.e. a certain pipeline) with multiple gas start times. The team assessed the three tables covering the current gas day timings, harmonisation of gas day start times and harmonisation of nomination cut-off times (Appendix D). The group was reminded that the timings on the third table are indicative only. One member suggested changing the pipeline cut-off time to 2pm, instead of 3pm. The group discussed if the CTP and DAA products would be at risk if gas harmonisation times are not implemented from the beginning. 	<ul style="list-style-type: none"> AEMO and other team members will check if it is feasible to implement the gas harmonisation day by summer 2018/19. 	

	Agenda Item	Discussion	Actions	Decision/views
12	Project team road map	<ul style="list-style-type: none"> The group noted that the Advisory Panel would be meeting on the 21 July. 		
13	Close	N/A	N/A	N/A
14	Next Meetings Wed-Thu, 9-10 Aug 2017 – Day-ahead auction Project Team meeting	<ul style="list-style-type: none"> Meeting will take place in <u>Brisbane</u> on the 9-10 August. 		

Appendix A – Pipeline capacity trading architecture diagram



Pipeline capacity trading architecture



Notes: (1) A primary shipper could also operate as a secondary shipper; (2) the GMRG will be developing the instruments that are underlined; (3) In consultation with industry, GMRG will also develop proposed governance and supporting changes for the National Gas Law and Rules, and AEMO will develop procedures..

Appendix B – Overview of the governance framework

Overview of the governance framework for capacity trading platform

Capacity trading legal architecture: Draft 12 July 2017

Mechanism	Capacity Platform	Day Ahead Auctions		Standard Terms
		Auction platform	AEMO – SP relations	
Instrument	Role			
NGL	Creates the high-level legal architecture – rule making powers, AER and AEMO functions and powers and obligations (principally on service providers). For example, AEMO GSH functions are in Division 2B of Part 6 of Chapter 2.			
Regulations	Under the NGR – identify civil penalty provisions, deal with some liability issues Under other legislation – as required to support the capacity platform and auctions			
NGR	AEMO's obligations to establish and operate exchange (Part 22), governance, market conduct and possibly some pricing	AEMO's powers and obligations, including establishing the day ahead capacity market agreement and payments to service providers Service provider obligations to submit capacity to auction, primary shipper obligations when nominating Market conduct and monitoring arrangements		Governance arrangements – creation / amendment of Operational GTA terms Service provider obligations to offer Operational GTA encompassing standard terms and pipeline-specific terms
Procedures	N/A	N/A	Detailed information and communication requirements	N/A
Terms of participation / terms of use	Exchange Agreement (AEMO and shippers)	Day ahead capacity market agreement (AEMO and shippers)	N/A	Short form agreement between shipper and service provider incorporating Operational GTA standard terms and pipeline-specific terms
Product definitions	Schedules to the Exchange Agreement	Schedules to the auction participation agreement	See "Pipeline-specific terms" row	See "Pipeline-specific terms" row
Standard terms	Operational GTA applies to the use of capacity bought in both mechanisms and may be used for bilateral trades.			
Pipeline-specific terms	Operational GTA allows some terms to be defined by the service provider. Monitored through Operational GTA governance arrangements.			

Overview of the governance framework for day-ahead auctions

Overview of the governance framework for day-ahead auctions	
National Gas Law - key changes	
AEMO's functions and powers	<p>The NGL will specify the new functions and powers of AEMO as the operator of the day-ahead capacity market, covering:</p> <ul style="list-style-type: none"> (a) establishing, operating and administering the day-ahead capacity market, encompassing the obligations of service providers and the auction arrangements; (b) <u>making</u> and administering a day-ahead capacity market agreement. <p>Other changes will support the operation of these provisions, such as power to make Procedures. Existing provisions (91E, 91H and 91K) cover payments and liability issues. Sections 91G to 91GH will apply to AEMO in relation to the information provided to it.</p>
Service Providers	<p>The NGL will specify the obligation of the service provider for a transmission pipeline to:</p> <ul style="list-style-type: none"> (a) register with AEMO in the day-ahead capacity market, unless exempted from registration under the Rules; (b) comply with the Procedures made for the day-ahead capacity market; (c) <u>give</u> information to AEMO that relates to and is necessary for the operation and administration of the day-ahead capacity market.¹ <p>The NGL may specify that the service provider is not liable to a primary shipper under a primary GTA in relation to the use of capacity the subject of the GTA but sold through the day-ahead capacity market in accordance with the Rules.</p> <p>The NGL will specify the obligation of service providers to offer the standard form Operational GTA to any person on request.²</p>

¹ Similar to section 91FEA for the STTM and subject to provisions similar to sections 91FEB, 91FEC and 91FED dealing with duties of confidence, false and misleading information and immunity.













Overview of the governance framework for day-ahead auctions	
Primary Shippers	The NGL may impose a duty on primary shippers to register with AEMO in the day-ahead capacity market, unless exempted from registration under the Rules. The main purpose of registration would be to support market conduct rules, for example in relation to nominations and renominations.
AER	The AER's existing powers including monitoring, information collection and enforcement will apply, with any changes necessary to extend them to the day-ahead capacity market.
AEMC	The AEMC's powers to make rules under section 74(3) will be extended to the day-ahead capacity market.
SA Minister	The SA Minister will be empowered to make initial Rules for the day-ahead capacity market.
Regulations made under the National Gas Law – key changes	
Liability	Regulations to specify liability caps, if any, for the purposes of section 91K.
Penalties	Regulations to specify civil penalty or conduct provisions.
National Gas Rules – key content	
Registration arrangements	Rules setting out the arrangements for registration with AEMO. Rules allowing the AER to grant exemptions from the obligation to register, where specified criteria are satisfied.
Service provider obligations	Rules to establish the role of service providers including: <ul style="list-style-type: none"> (a) the obligation to provide information about contracted but un-nominated capacity in accordance with the Procedures; (b) the sale of capacity in the day-ahead capacity market in packages determined by AEMO; (c) arrangements for giving effect to the auction results including providing pipeline services on the terms of the applicable Operational GTA (unless otherwise agreed with the shipper) and the priority to be given to those services;

² The governance arrangements for the Operational GTA are beyond the scope of this note.

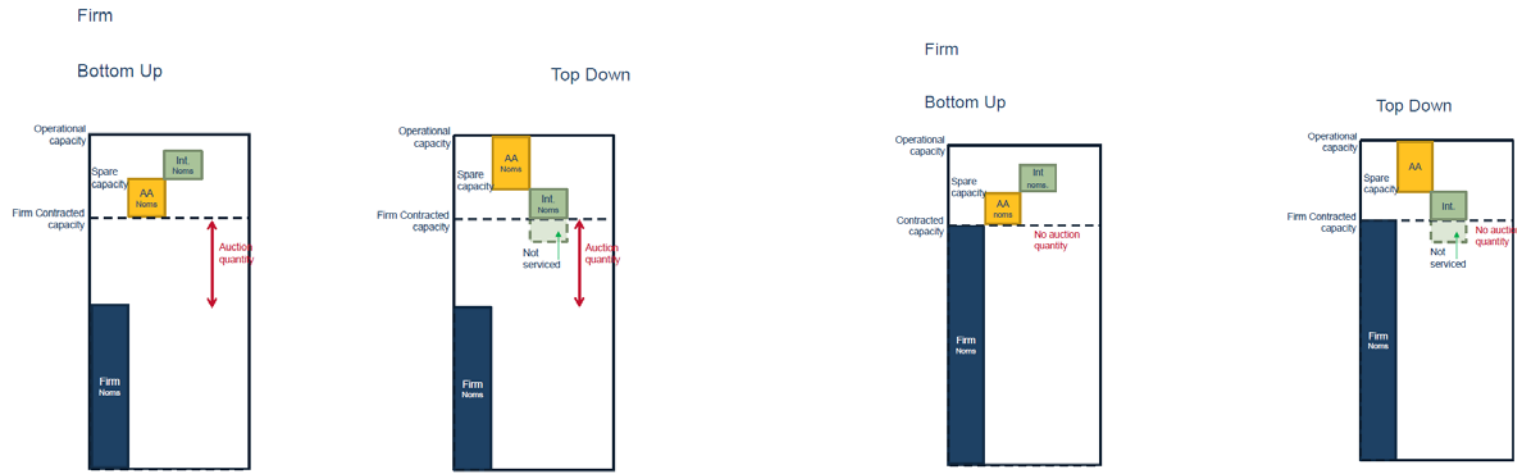
Overview of the governance framework for day-ahead auctions	
	(d) <u>payments</u> by AEMO to service providers, net of AEMO costs.
Capacity auctions	<p>Rules to:</p> <ul style="list-style-type: none"> (a) set out principle to be applied by AEMO in determining what is to be sold, for example, packaging across pipelines; (b) require the platform to operate on a day-ahead auction basis and setting out any key auction principles; (c) specify the content of the day ahead capacity market agreement and how that can change (similar to the approach to the exchange agreement for the gas supply hub); (d) deal with any matters that need to be dealt with in the Rules (and not the agreement) in order to satisfy other regulatory requirements
Market conduct	Rules setting out any market conduct or market integrity rules applicable to service providers and shippers and the role of AEMO and the AER in monitoring and enforcement.
Procedures – key content	
Applicable to AEMO, service providers and possibly also primary shippers	Procedures setting out the detailed information requirements including the content, timing and form of information to be provided by service providers.
Agreements	
Day-ahead capacity market agreement (AEMO and shippers)	The agreement under which shippers participate in day-ahead auctions, covering matters such as eligibility to participate, market administration, auction rules, prudential arrangements, communication of auction results and payment and settlement
Operational GTA (shippers and service providers)	This is the agreement being put together by the standardisation project team. The day-ahead capacity market agreement will assume that capacity bought in the auctions is used on the terms of the Operational GTA. It will be open to shippers and service providers to agree other arrangements (eg nominating capacity under a primary GTA).

Appendix C – Product design options to be taken forward and calculation of auction quantity

Product design options

	Auction Product Options			Limit renomination rights to allow some capacity to be sold on a firm basis with remainder sold on an interruptible basis <i>Note that this could be achieved by only recognising firm renomination rights and/or restricting the use of the reasonable endeavours renomination rights in a similar manner to the approach used in the EU.</i>
	Firm Auction Product	As Available Auction Product	Interruptible Auction Product	
Services		* Transportation services (forward haul, backhaul and/or bi-directional) * Compression services in Gas Supply Hubs (i.e. Wallumbilla and Moomba)		
Priority of Auction Product in Scheduling	<ol style="list-style-type: none"> 1. Firm product. 2. Auction product. 3. As available product. 4. Authorised overrun. 5. Interruptible product. 	<ol style="list-style-type: none"> 1. Firm product. 2. As available product. 3. Auction product. 4. Authorised overrun. 5. Interruptible product. 	<ol style="list-style-type: none"> 1. Firm product. 2. As available product. 3. Authorised overruns. 4. Interruptible product. 5. Auction product. 	<ol style="list-style-type: none"> 1. Firm product. 2. Firm Auction product. 3. As available product. 4. Authorised overrun. 5. Interruptible product. 6. Interruptible auction product. 
Priority of Auction Product in Curtailment	 <ol style="list-style-type: none"> 1. Firm and auction products. 2. As available product. 3. Authorised overrun. 4. Interruptible product. 	 <ol style="list-style-type: none"> 1. Firm product. 2. As available and auction products. 3. Authorised overruns. 4. Interruptible product. 	 <ol style="list-style-type: none"> 1. Firm product. 2. As available product. 3. Authorised overruns. 4. Interruptible and auction products. 	 <ol style="list-style-type: none"> 1. Firm product (incl. firm auction product). 2. As available product. 3. Authorised overrun. 4. Interruptible products (incl. int. auction product). 
Priority of intra-day renomination rights				
Impact on Auction Capacity Holder's Nominations if Other Shippers Renominate Up	No impact - auction product ranks ahead of all renominations so it won't be curtailed.	Auction product curtailed if insufficient contracted but un-nominated capacity available to meet renominations by shippers with firm products. Not curtailed by renominations from shippers with as available or interruptible products. Curtailment based on auction bid stack. Auction winners reimbursed if curtailed.	Auction product curtailed if insufficient contracted but un-nominated capacity available to meet renominations by shippers with firm and as available products. Curtailment based on auction bid stack. Auction winners reimbursed if curtailed.	Firm auction product not affected but interruptible auction product curtailed if insufficient contracted but un-nominated capacity available to meet renominations by shippers with firm and as available products. Curtailment of interruptible auction product based on auction bid stack. Interruptible auction winners reimbursed if curtailed.
Complies with AEMC's Recommendations?	Does not comply with AEMC's recommendations that: * renominations by incumbent shippers be accommodated (required outcome); or * capacity purchased through the auction be curtailed before firm capacity (preferred outcome).	Complies with the AEMC's recommendations that: * renominations by incumbent shippers be accommodated (required outcome); or * capacity purchased through the auction be curtailed before firm capacity (preferred outcome).		May not comply with the AEMC's recommendations that: * renominations by incumbent shippers be accommodated (required outcome); or * capacity purchased through the auction be curtailed before firm capacity (preferred outcome).
Impact on other markets	Could affect ability of GPGs with firm capacity rights to bid into the NEM	n.a.	n.a.	Could affect ability of GPGs that don't have firm renom rights to bid in NEM
Options if auctioned capacity curtailed	n.a.	If spare physical capacity available, auction winner could purchase an as available product from the pipeline operator at pre-agreed rates.		Firm auction winner unaffected. Interruptible auction winner could purchase an as available product from the pipeline operator if there is spare physical capacity available.

Calculation of auction capacity – firm product



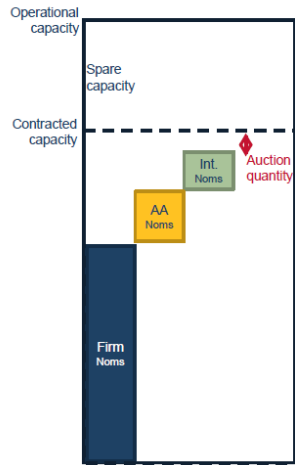
Calculation of auction capacity – as available product



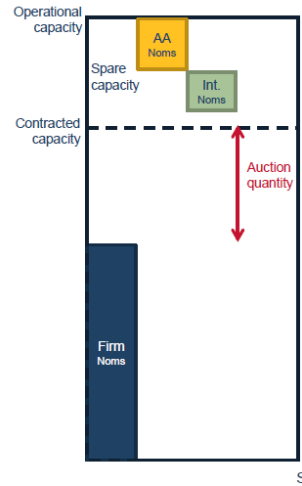
Calculation of auction capacity – interruptible product

Interruptible

Bottom Up

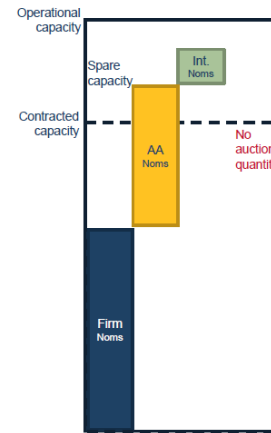


Top Down

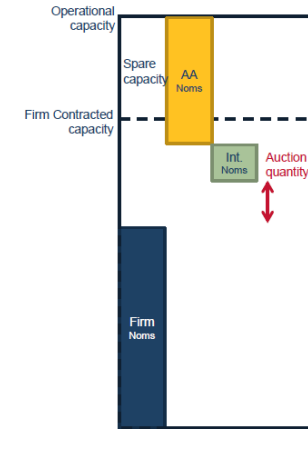


Interruptible

Bottom Up



Top Down



Appendix D – Gas day timings

Current Gas Day Timings (All Times AEST)

	Gas Day Start Time for Gas Day D	OSH Opening	DWGM Reschedule for Gas Day D	STTM Ex Ante Bids and Offers Due for Gas Day D+1	STTM Ex Ante Schedule for Gas Day D+1	DWGM Reschedule for Gas Day D	NEM Day Ahead Bids Due for NEM Day D+1	NEM Pre Dispatch for NEM Day D+1	Indicative Timing for Trading of D+1 Products on CTP to Close*	MDQ Purchased on CTP for D+1 Transferred to 2nd Shipper	Pipeline Nomination Cut Off Time for Gas Day D+1**	Indicative Timing for Day-Ahead Auction***			Operator Transfers MDQ Purchased through Auction	OSH Closing	Auction Capacity Purchasers Submit Nominations	DWGM Reschedule	STTM Contingency Gas Bids and Offers Due for Gas Day D+1	Auction Capacity Purchasers Submit Nominations	DWGM Reschedule for Gas Day D	Gas Day Start Time for Gas Day D+1		
NSWIACT	8:30 AM	9:00 AM	n.a.	12:00 PM	1:00 PM	n.a.	12:30 PM	ASAP after 12:30 PM	12:30 PM	1:00 PM	2-2:30 PM	4:30 PM	5:00 PM	5:10 PM	5:00 PM	6:00 PM	n.a.	6:00 PM	n.a.	6:30 PM	n.a.	n.a.	10:00 PM	8:30 AM
SA	8:30 AM								2:00 PM	2:30 PM	3:30 PM													6:30 AM
Queensland	8:00 AM								1:30 PM	1:00 PM	3-4:00 PM													8:00 AM
Victoria	8:00 AM								10:00 AM	n.a.	n.a.													2:00 PM

* Trading assumed to end 1.5 hours before nomination cut-off time to allow pipeline operators to make MDQ transfers.

** Nomination Cut-Off Timings assumed to be offsets to gas day start times

*** Capacity assumed to be published 30 mins after nomination cut-off time. Shippers are then assumed to have 30 mins to make their bids in the auction. The auction is then assumed to be completed within 10 minutes of bids closing.

Harmonisation of Gas Day Start Times (Currently Due to Occur on 1 April 2021) - (All Times AEST)

	Gas Day Start Time for Gas Day D	OSH Opening	DWGM Reschedule for Gas Day D	STTM Ex Ante Bids and Offers Due for Gas Day D+1	STTM Ex Ante Schedule for Gas Day D+1	DWGM Reschedule for Gas Day D	NEM Day Ahead Bids Due for NEM Day D+1	NEM Pre Dispatch for NEM Day D+1	Indicative Timing for Trading of D+1 Products on CTP to Close*	MDQ Purchased on CTP for D+1 Transferred to 2nd Shipper	Pipeline Nomination Cut Off Time for Gas Day D+1**	Indicative Timing for Day-Ahead Auction***			Operator Transfers MDQ Purchased through Auction	OSH Closing	Auction Capacity Purchasers Submit Nominations	DWGM Reschedule	STTM Contingency Gas Bids and Offers Due for Gas Day D+1	DWGM Reschedule for Gas Day D	Gas Day Start Time for Gas Day D+1		
NSWIACT	8:00 AM	9:00 AM	n.a.	11:30 AM	12:30 PM	n.a.	12:30 PM	ASAP after 12:30 PM	12:00 PM	1:00 PM	1:30-2:00 PM	3:30 PM	4:00 PM	4:10 PM	5:00 PM	5:00 PM	5:30 PM	n.a.	6:00 PM	n.a.	n.a.	10:00 PM	6:00 AM
SA									1:30 PM	2:30 PM	3:00 PM												6:00 AM
Queensland									11:00 AM	11:30 AM	1-2:00 PM												8:00 AM
Victoria									10:00 AM	n.a.	n.a.												2:00 PM

* Trading assumed to end 1.5 hours before nomination cut-off time to allow pipeline operators to make MDQ transfers.

** Nomination Cut-Off Timings assumed to be offsets to gas day start times

*** Capacity assumed to be published 30 mins after nomination cut-off time. Shippers are then assumed to have 30 mins to make their bids in the auction. The auction is then assumed to be completed within 10 minutes of bids closing.

Harmonisation of Nomination Cut-Off Times to 3 pm AEST - (All Times AEST)

	Gas Day Start Time for Gas Day D	OSH Opening	DWGM Reschedule for Gas Day D	STTM Ex Ante Bids and Offers Due for Gas Day D+1	STTM Ex Ante Schedule for Gas Day D+1	DWGM Reschedule for Gas Day D	NEM Day Ahead Bids Due for NEM Day D+1	NEM Pre Dispatch for NEM Day D+1	Timing for Trading of D+1 Products on CTP to Close*	MDQ Purchased on CTP for D+1 Transferred to 2nd Shipper	Pipeline Nomination Cut Off Time for Gas Day D+1**	Indicative Timing for Day-Ahead Auction***			Operator Transfers MDQ Purchased through Auction	OSH Closing	Auction Capacity Purchasers Submit Nominations	DWGM Reschedule	STTM Contingency Gas Bids and Offers Due for Gas Day D+1	DWGM Reschedule for Gas Day D	Gas Day Start Time for Gas Day D+1		
NSWIACT	8:00 AM	9:00 AM	n.a.	11:30 AM	12:30 PM	n.a.	12:30 PM	ASAP after 12:30 PM	1:30 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM	4:10 PM	5:00 PM	5:00 PM	5:30 PM	n.a.	6:00 PM	n.a.	n.a.	10:00 PM	6:00 AM
SA									n.a.	n.a.	n.a.												6:00 AM
Queensland									n.a.	n.a.	n.a.												8:00 AM
Victoria									10:00 AM	n.a.	n.a.												2:00 PM

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