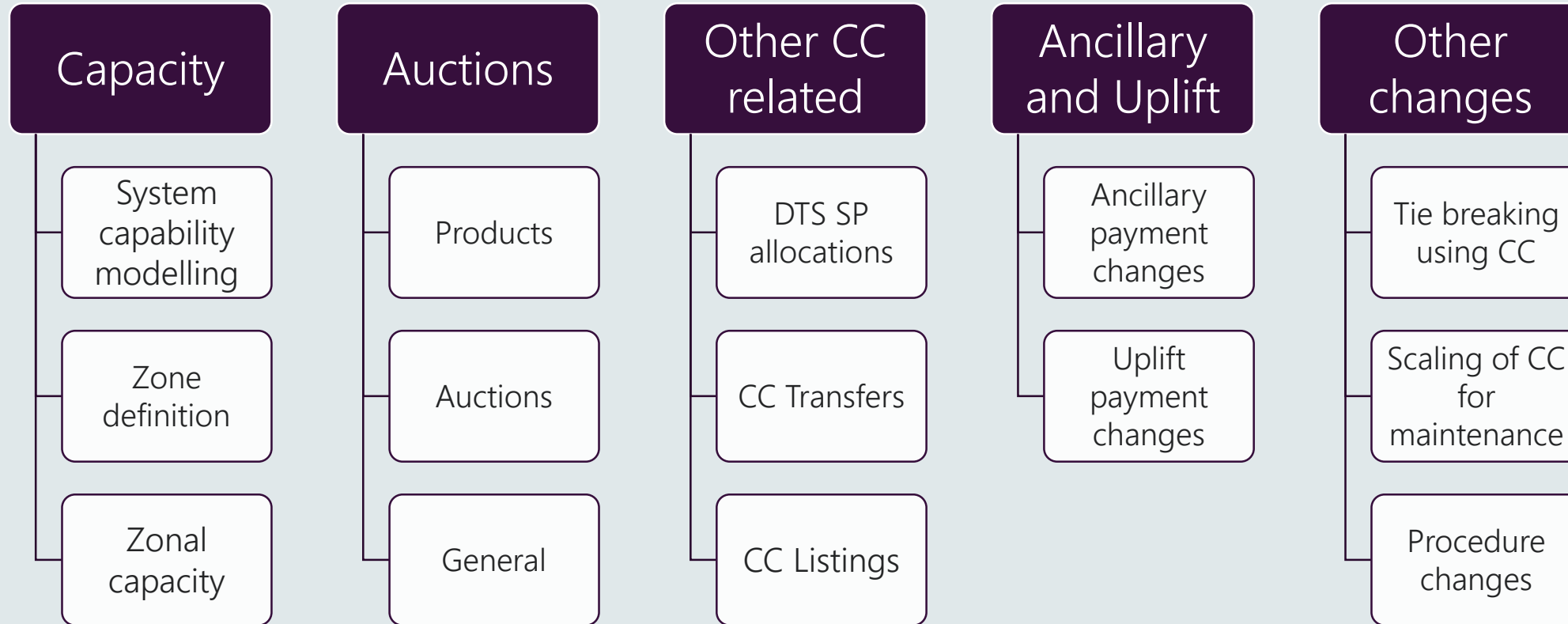


GWCF report DWGM Enhancement WG

10 Dec 2020

DWGM Enhancement WG Scope



Changes to Market Design

GWCF Sep 2020

- To avoid repetition, will only go over changes since last GWCF
- Changes to the Market Design Presentation
 - Changes in orange text
- The link block arrow jumps to the next change



Capacity certificates (CC) recap

- All AMDQ replaced by CC and retired 31 Dec 2022
- Scheduling will be to actual system capacity
 - CC for tie breaking only
 - Do not need to hold CC to be scheduled
- CC will be:
 - Issued for a calendar month
 - Auctioned in multiple tranches twice a year over 3 years (ie 6 tranches)
 - In some circumstances allocated by DTS SP
 - Transitional auctions prior to first scheduled auction allowed
 - Payment before CC issued to auction winners
 - Based on system capability modelling that is refined over time
- CC may be transferred from one MP to another MP using market systems
 - Listing service for buyers and sellers of CC

Capacity

System capability modelling

- On similar 1:20 peak day forecast basis as VGPR, and using same data
 - Only one year of monthly data, but that will be extrapolated to 3 year outlook
 - Completed by March each year, and updated post winter if relevant
- Only includes committed projects for DTS or connected facilities
 - As per VGPR requirements to provide information
 - Details of upcoming projects included in VGPR and auction notices
 - Take a conservative view of completion for projects that increase capacity
- Excludes any planned maintenance
 - Execution of maintenance could be affected by many factors
- Basis for determination of the quantity of monthly auction products
 - Published after completion of modelling
 - Showing quantities to be allocated by auction and by DTS SP
 - Qty can be adjusted if capacity changes before fully auctioned

Capacity Certificate Zones

- CC will be for entry or exit in a zone
 - Entry Zone for system injection points
 - Exit Zone for system withdrawal points
- Zone will be as large as possible to maximise flexibility of use
- AEMO proposes zones and consults with MP
 - Min 4 weeks for consultation
 - Consultation supported by modelling
 - Including future enhancements where known
- New connections may require changes to zones
 - Consultation will include proposals to re-allocate CC in current zone

Zonal capacity

- Zonal capacity is determined from:
 - system capability modelling (pipeline capacity)
 - information provided by connected facilities (system point capacity)
- In general, the zonal capacity is the minimum of pipeline capacity and total system point capacity
 - Min ({Total pipeline capacity in zone}, {Total system point capacity in zone})
 - Ignoring “back off effect” of multiple pipelines
 - Flows on one pipeline may reduce capacity on another
 - MP bidding behaviour will preference system points (ie price based)
 - operational schedule constraints will manage back off effects
 - Awaiting feedback from Nov WG on some more detailed options dealing with
 - Exit capacity on SWP depending on GPG demand assumptions
 - Entry capacity to be based on assumptions of likely flows from hub or maximum flows

[Next](#)
[Update](#)

Auction

Auction of CC

Capacity will be auctioned:

- in blocks of one calendar month (*auction product*)
- for three years ahead (*auction period*)
- 2 months before earliest month being auctioned
 - *Auction Notice* issued 20 business days before auction
 - Includes qty, known maintenance, enhancements etc
- at six monthly intervals
- according to % of current zonal capacity to be released in each tranche (*capacity release schedule*)
- Procedure will reflect as percentage of remaining capacity
 - Allows auction to reflect capacity changes and unsold capacity in previous auctions

Capacity Release Schedule

Tranche	Months	Tranche %	Cumul. %
1	1 -6	20%	100%
2	7 -12	20%	80%
3	13 – 18	15%	60%
4	19 - 24	15%	45%
5	25 – 30	15%	30%
6	31 - 36	15%	15%

Progressive auction #1

		Jan 23	Jul 23	Jan 24	Jul 24	Jan 25	Jul 25	Jan 26	Jul 26	Jan 27	Jul 27	Jan 28
		Jun 23	Dec 23	Jun 24	Dec 24	Jun 25	Dec 25	Jun 26	Dec 26	Jun 27	Dec 27	Jun 28
Auction 1	Nov 2022	20%	20%	15%	15%	15%	15%					

- First auction in Nov 2022
- System capability modelling updated after post winter review
- Auction period Jan 23 – Dec 25
- Capacity release schedule as shown

Progressive auction #2

		Jan 23	Jul 23	Jan 24	Jul 24	Jan 25	Jul 25	Jan 26	Jul 26	Jan 27	Jul 27	Jan 28
		Jun 23	Dec 23	Jun 24	Dec 24	Jun 25	Dec 25	Jun 26	Dec 26	Jun 27	Dec 27	Jun 28
Auction 1	Nov 2022	20%	20%	15%	15%	15%	15%					
Auction 2	May 2023		20%	20%	15%	15%	15%	15%				

- Second auction in May 2023
- System capability modelling Mar 2023
- Auction period Jul 23 – Jun 26
- Capacity release schedule as shown

Progressive auction #3

		Jan 23	Jul 23	Jan 24	Jul 24	Jan 25	Jul 25	Jan 26	Jul 26	Jan 27	Jul 27	Jan 28
		Jun 23	Dec 23	Jun 24	Dec 24	Jun 25	Dec 25	Jun 26	Dec 26	Jun 27	Dec 27	Jun 28
Auction 1	Nov 2022	20%	20%	15%	15%	15%	15%					
Auction 2	May 2023		20%	20%	15%	15%	15%	15%				
Auction 3	Nov 2023			20%	20%	15%	15%	15%	15%			

- Third auction in May 2023 for Auction period Jan 24 – Dec 26
- System capability modelling Oct 2023 – **capacity increase from 150 to 200 TJ from Jan 2024**
 - Auction to cumulative percentage for each tranche less previously sold
 - Tranche 1 (Jan 24 > Jun 24) – sell 100% of 200 less previously sold 80% of 150 = 80TJ
 - Tranche 2 (Jul 24 > Dec 24) – sell 80% of 200 less previously sold 60% of 150 = 70TJ etc

Progressive auctions 4 - 6

		Jan 23	Jul 23	Jan 24	Jul 24	Jan 25	Jul 25	Jan 26	Jul 26	Jan 27	Jul 27	Jan 28
		Jun 23	Dec 23	Jun 24	Dec 24	Jun 25	Dec 25	Jun 26	Dec 26	Jun 27	Dec 27	Jun 28
Auction 1	Nov 2022	20%	20%	15%	15%	15%	15%					
Auction 2	May 2023		20%	20%	15%	15%	15%	15%				
Auction 3	Nov 2023			20%	20%	15%	15%	15%	15%			
Auction 4	May 2024				20%	20%	15%	15%	15%	15%		
Auction 5	Nov 2024					20%	20%	15%	15%	15%	15%	
Auction 6	May 2025						20%	20%	15%	15%	15%	15%

- Jul 25 > Dec 26 fully auctioned through tranches
- Blue shading unsold with rolling auctions

Transitional auctions

		Jan 23	Jul 23	Jan 24	Jul 24	Jan 25	Jul 25	Jan 26	Jul 26	Jan 27	Jul 27	Jan 28
		Jun 23	Dec 23	Jun 24	Dec 24	Jun 25	Dec 25	Jun 26	Dec 26	Jun 27	Dec 27	Jun 28
Auction 1	Nov 2022	20%	20%	15%	15%	15%	15%					
Auction 2	May 2023	40%	20%	20%	15%	15%	15%	15%				
Auction 3	Nov 2023		30%	20%	20%	15%	15%	15%	15%			
Auction 4	May 2024			22.5%	20%	20%	15%	15%	15%	15%		
Auction 5	Nov 2024	40%	30%	22.5%	15%	20%	20%	15%	15%	15%	15%	
Auction 6	May 2025				15%	7.5%	20%	20%	15%	15%	15%	15%
						7.5%						

- Sold in two equal transitional auctions prior to Auction #1
- Allows price discovery before Auction #1

Auction general

- 10 bid steps per zone (GJ and \$N.nnnn)
- Linked bids will be possible:
 - Where one CC without the another is not relevant to MP
 - 5,000 GJ of Gippsland Entry CC and Northern Exit CC for Jan 2023
 - Over a period
 - 10,000 GJ of Culcairn Entry CC for Jan 2023 to Dec 2025
 - Both multiple CC and periods possible
- Auction system open for bids until 5pm AEST on day prior to processing
 - Auction will run no later than 5pm AEST on day of processing
 - Allows for resolution of system issues
 - Report will be published
 - Private report to MP on their position
 - Public report on clearing prices and price sensitivities
 - WG still considering options to publish de-identified bid stacks

Auction general

- Auction tie breaking must be random selection
 - If 2 bids at same price, and cannot both be met, either
 - 1 randomly selected for partial quantity OR
 - 1 randomly selected to full quantity and other for remaining balance
- Auction clearing price set for each zone at lowest successful bid price
 - Zero dollars if auction capacity not cleared
- Auction fee is payable on successful bids
- Settlement via payment before CC are allocated to MP
 - Not in DWGM prudential and settlement
 - If CC not allocated due to non payment, included in next available auction
 - Noting CC are not mandatory for bidding
 - **Payment for auctions via Austraclear 5 business days after auction**

Next
Update

CC Related

DTS SP Allocation / CC Listing

Allocation of CC by DTS SP

- If an expansion or extension of DTS is
 - Not included in DTS SP capital base; AND
 - AER has determined the portion of the additional capacity that is not approved CAPEX
- DTS SP may direct AEMO to allocate the capacity to an MP
 - MP must request allocation

CC listing service

- Market systems will allow listing of:
 - Offer to treat to buy CC
 - Offer to treat to sell CC
- No trading or settlement on market systems
 - Any bilateral trades can be registered for transfer

Transfer CC between MP

- MP may transfer CC between themselves to reflect bilateral trading
 - No market settlement of this trade
- Covers whole auction product (block of one calendar month for a zone)
- New market system for buyer to lodge and seller to confirm proposed transfer
 - Must be an active MP to access system
 - Transfer pending from lodgement until confirmation
 - Confirmation must be by 12 midnight AEST on day of lodgement
 - Unconfirmed transfers cancelled
 - Lodgement & confirmation no later than 3 days before day of first gas day of auction product
 - 12 midnight AEST on 28 Sep for auction product for October
 - Allows use of product for 2 day ahead provisional schedules
 - AEMO & WG considering balance of month transfer
 - No compelling case for them, so not part of design at this stage

Next
Update

Ancillary Payments & Uplift Charges

Ancillary payments (AP)

- NGR removes requirement that AP not payable where supporting AMDQ
 - Removes Injection hedge and Agency injection hedge nominations
- WG supported removing Negative AP when previously scheduled bids are de-scheduled
 - Bid steps at bid step prices at or near marginal prices may be scheduled and then de-scheduled in subsequent schedules.
 - The PS and OS will match in these instances.
- Principles in AP Procedure and formulae updated accordingly
- AEMO identified that negative AP arise through MSIQ/MSWQ formulae, and will be replacing MSIQ/MSWQ with the Effective Pricing Schedule (EPS)
 - Consistent with ancillary payment rule NGR 239(1) AP arise from OS and PS differences
 - MSIQ/MSWQ uses EPS in many instances anyway
 - Reduces complexity by removing a term from ancillary payment calculations
 - Retaining MSIQ/MSWQ would mean significant additional complexity to exclude conditions that lead to negative AP

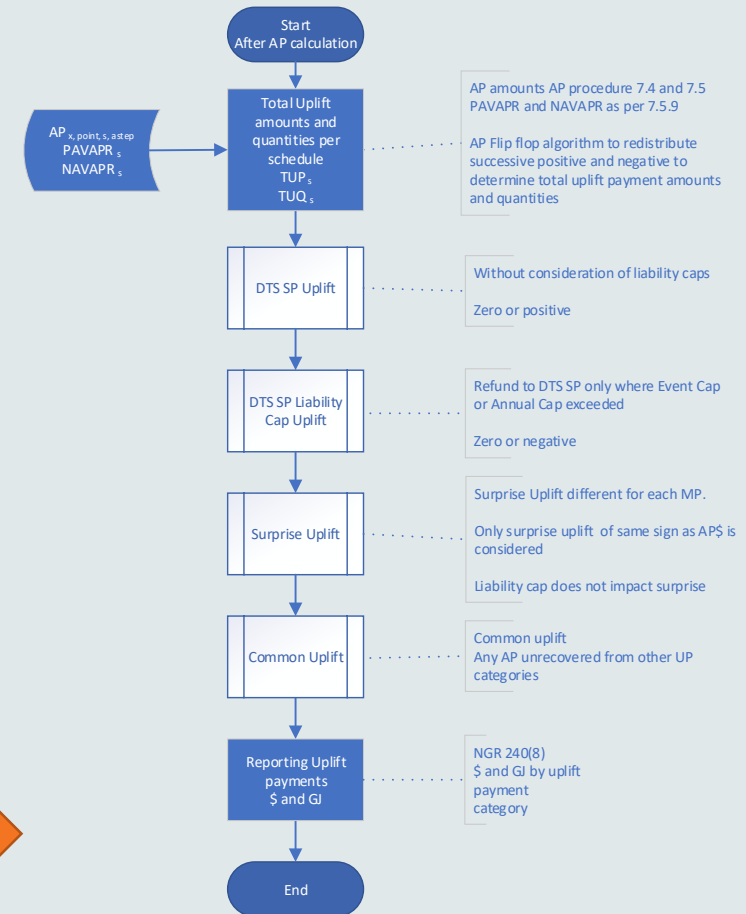
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Uplift payments (UP)

- Rules introduce Uplift Payment Categories
 - Must together recover AP total
 - Previously specified congestion uplift only
 - Removal of AMDQ means no congestion uplift as AMIQ exceedance cannot be determined
- DTS Service Provider Uplift now only UP category mandated in rules
 - Where DTS capacity falls below that specified in Service Envelope Agreement (SEA)
- WG has not identified any additional UP categories leaving unchanged
 - DTS SP liability cap exceedance uplift categories for event cap and annual cap exceedance
 - Payment to DTS SP shown for transparency
 - Surprise UP
 - Common UP (incl unrecovered AEMO override)
- DTS SP UP will only cover difference in AP resulting from constraint and AP that would have occurred if DTS operating at SEA capacity under same starting conditions
 - AP that would have resulted while operating at SEA capacity recovered through other uplift

Sequence of uplift payments

- Total uplift payments are adjusted for successive positive and negative ancillary payments
 - Know as “AP re-distribution” or “AP Flip Flop” algorithm
- DTS SP uplift
 - Cause of AP where SEA capacity not available
 - Cap DTS SP Uplift GJ at AP GJ
 - Determined at AP \$ per GJ (positive only)
 - Payment by DTS SP
- Liability Caps
 - Calculated as payment to DTS SP for exceedance
- Surprise uplift
 - Cause of AP above AP at SEA capacity
 - Cap Surprise uplift GJ at AP GJ less DTS SP GJ
 - determined at AP \$ per GJ (positive or negative)
- Common uplift
 - AP less other UP categories
 - Allocated based on MP withdrawals



Next
Update

Other changes

Use of CC for tie breaking

- New NGR require that the Gas Scheduling Procedures must include details of the process to use CC for tie breaking
- Currently MP must enter the percentage of AMDQ that is to be applied to each system injection point
- The WG supported AEMO's proposal that this would be automated
 - An MP's holding of CC in a zone will be allocated to
 - Bid steps of any bids at all system point in a zone in price order
 - Ascending for injection, descending for withdrawal
 - To the extent of CC holdings for the gas day of the schedule
 - Avail CC pro rated by bid step qty where price is tied and insufficient CC remain
 - The scheduling process will give priority to those bid steps allocated CC
 - MP will need to prioritise allocation of CC between system points through bid step prices
 - \$0.0000 allocated CC before \$0.0001
- Where multiple tied bid steps are fully supported by CC but cannot be fully scheduled
 - tied bids will be pro-rated according to tied bid step quantities

Scaling CC holdings

- System capability modelling is excluding reduction of capacity due to maintenance
 - Changing priorities mean maintenance may only be finalised at short notice
 - Unplanned outages may also reduce capacity
- Where maintenance reduces capacity, bid steps that exceed the available capacity and have CC will be scheduled to a greater extent than the proportion of CC holdings would indicate
 - Such bids may not be made in good faith
- The WG is currently considering options to equally scale CC holdings so that the total adjusted CC reflect the capacity that available in the schedule
 - Maintains the proportionality of CC purchases

Procedure changes

New procedures

- Capacity Certificates Auction Procedures
- Capacity Certificates Transfer Procedures

Procedures requiring review / changes

- Electronic Communication Procedures
- Gas Scheduling Procedures
- Ancillary Payment Procedures (and Ancillary Payment Functional Design)
- Uplift Payment Procedures (and Uplift Payment Functional Design)
- Accreditation Procedures
- Connection Approval Procedures
- Maintenance Planning Procedure

Retired Procedures

- AMDQ Procedures
- Injection Tie Breaking right functional design

What next

Next Steps

- Finalise outstanding market design issues Q3/Q4 2020
 - Market design to GWCF in Dec 2020 with GWCF WG report
- AEMO drafts new and changed procedures Q4 2020
 - Exposure drafts to DWGM Enhancements WG **by 18 Dec 2020**
- Formal consultation on new and changed procedures Q1 2020
 - **Late Jan to April (PPC and IIR)**
- Consultation with GWCF on high level implementation approach
 - Q2 2021
 - Input to AEMO project planning
- Covering
 - System Capability Modelling
 - Zone definition and consultation
 - Training
 - Readiness monitoring & reporting
 - Market Trial
 - Cut over approach

Questions

- ?