

REMCo

Details of Chapter 5:
Allocation, Reconciliation and Swing

Retail Energy Market Company

DISCLAIMER

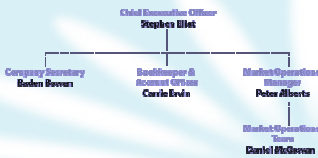
The Retail Market Rules (the "Rules") are the final word!

- This presentation has been prepared to assist participants/stakeholders with their understanding of the operation of the WA gas retail market.
- The information presented here is a guide only. Participants should refer to the Rules to ensure that they have a full understanding of the risks associated with operating in the market, and that they are operating in accordance with its obligations.

REMCo Retail Energy Market Company 2

REMCo OVERVIEW

Operational structure.



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graph TD
    Hill[Chief Executive Officer  
Stephen Hill] --- Peters[Company Secretary  
Brenda Peters]
    Hill --- Evans[Head Manager & Account Officer  
Carrie Evans]
    Hill --- Roberts[Market Operations Manager  
Peter Roberts]
    Roberts --- MacGowan[Market Operations Team  
Daniel MacGowan]
  
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TOPICS

Overview of the Industry Committees.

Overview of the Rules.

- Chapter 1 – Interpretation and administration;
- Chapter 2 - REMCo Registry;
- Chapter 3 - MORN Transactions (eg Transfers);
- Chapter 4 - Metering;
- Chapter 6 – Compliance;
- Chapter 7 - Reporting and Audits;
- Chapter 8 – Administration;
- Chapter 9 - Rule Change Process; and
- Chapter 10 - General Provisions.

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TOPICS (continued)

Chapter 5 - Allocation, Reconciliation and Swing.

- Market Concepts;
- Assumptions;
- Introduction;
- User Obligations;
- Allocation;
- Reconciliation; and
- Swing service.

Basic worked examples.

Other relevant information.

Questions.

REMCo Retail Energy Market Company 5

REMCo OVERVIEW

Industry Committees.

Rule Change Committee (RCC):

- A standing committee for providing effective and efficient consultation with stakeholders on development of the gas retail market.

Balancing Load Allocation Settlement Team (BLAST):

- A working group of subject matter experts that have a detailed understanding of the various business processes for retail market, and in particular, working knowledge of the Allocation, Reconciliation and Swing Service.

Technical Working Group (TWG):

- A forum for technical representatives that have a understanding of technical rules/standards that impact on the systems of REMCo and/or its market participants.

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OVERVIEW OF THE RULES

Introduction (Chapter 1):

- Provides legal clarity and definitions for the use of certain terms;
- Identifies who the Rules apply to;
- Requires compliance with the Specification Pack and Hub Terms and Conditions (Hub T&Cs); and
- Review of Rules.

Databases (Chapter 2):

- Requirements for REMCo to maintain the Delivery Point Identifier (DPI) Registry and the Network Operator to maintain a database of DPs; and
- Outlines obligations for maintaining the registry.

OVERVIEW OF THE RULES (continued)

MIRN Transactions (Chapter 3):

- Defines the obligations regarding MIRN discovery, transfers, connection/disconnection and permanent removal of delivery points; and
- Outlines the steps taken in the event of a ROLR event.

Metering (Chapter 4):

- Defines the obligations regarding meters (Basic and Interval), including installation, upgrades and removal;
- Describes meter reading activities (meter reading schedules); and
- Defines the obligations for gate point metering data;

OVERVIEW OF THE RULES (continued)

Metering (Chapter 4) (Continued):

- Describes meter data. Includes content, validation, estimation, substitution, delivery timelines
- Defines obligations around Heating Values.

Allocation, reconciliation and swing (Chapter 5):

- Main topic of this presentation, - will return to this later.

Compliance (Chapter 6):

- Establishes a Compliance Panel and deals with Rule breaches referred to the Compliance Panel.

OVERVIEW OF THE RULES (continued)

Reporting and Audits (Chapter 7):

- Extent and frequency of audit (negative assurance); and
- Publication of reports.

Administration (Chapter 8):

- Fees and charges; cost recovery.
- Confidentiality.

Rule change process (Chapter 9):

- Establishment of Rule Change Committee (RCC).
- Rule change process.

General Provisions (Chapter 10).

ALLOCATION, RECONCILIATION AND SWING (Chapter 5)

Topics covered under this section:

- Market Concepts;
- Basic Principles;
- Key terminology;
- Roles;
- Introduction;
- User Obligations;
- Allocation Instructions;
- Before and during the gas day;
- Allocation;
- Reconciliation; and
- Swing service.

ALLOCATION, RECONCILIATION AND SWING (continued)

Market Concepts:

- Purpose of Chapter 5:
 - Introduction (Part 5.1 of the Rules):
 - Key fundamentals and what networks are exempt; and
 - Shipper register .
 - Obligations (Part 5.2 of the Rules):
 - Establishes users' gas procurement obligations.
 - Allocation (Part 5.3, 5.4, 5.5 and 5.6 of the Rules):
 - Allocates all gas injections to retailers; and.
 - Determines each user's estimated total withdrawals for each day.

ALLOCATION, RECONCILIATION AND SWING (continued)

Basic principles (continued):

- Assumptions:
 - The sub-network is always in balance (i.e. total injections equal total withdrawals each day).
 - Reconciliation is a forward process (i.e. today's errors are fixed the day after tomorrow).
 - Pipeline transmission contracts, which pre-date the market, remain intact.

ALLOCATION, RECONCILIATION AND SWING (continued)

Key terminology:

- "Transmission Pipeline" means a pipeline which supplies gas to a "sub-network" at a "Gate point";
- A "sub-network" is a standalone part of a "Gas Distribution System" (GDS):
 - "sub-network" is a delivery point connected to at least one pipeline and is not connected by a Gas Distribution System (GDS) listed in Appendix 1 (eg: North Metro).
 - "farm tap sub-network" is a delivery point connected to only one pipeline and is not connected by a GDS listed in Appendix 1 (eg: Eneabba, Muchea, Kemerton etc).

ALLOCATION, RECONCILIATION AND SWING (continued)

Key terminology (continued):

- "uncovered sub-network" is a sub-network that is not a "covered pipeline" as defined in the National Gas Access Law; or is not subject to any other third party access regime. (eg: Albany).
- "Delivery Point" means the point at which a "user" takes delivery of gas from the "sub-network".
- "gas day" means the 24 hour period starting at 0800 hours on a day and ending at 0800 hours on the following day.

ALLOCATION, RECONCILIATION AND SWING (continued)

Roles:

- A “pipeline operator” operates a transmission pipeline, which transports gas from the gas source to the sub-network. The pipeline operator manages gas flows into the sub-network. (eg: DBNGP, Parmelia Pipeline).
- A “network operator” oversees the operation of the sub-network (i.e. the network of pipes that delivers gas to customers). (eg WA Gas Networks).
- “user” is a gas retailer that has a haulage agreement for the transport of gas through a “sub-network” to customers (Eg : Alinta Sales, Synergy, Premier Power).

ALLOCATION, RECONCILIATION AND SWING (continued)

Roles (continued):

- A “shipper” has a haulage agreement with a pipeline operator to transport gas along the transmission pipeline and deliver it to a user at a gate point (the transition point between the Pipeline and the sub-network).
 - Note: A “shipper” could be the same company as a “user” but REMCo systems treats them as separate entities.
- “swing service provider” is a shipper or a pipeline operator that uses its contractual rights to pipeline capacity to provide “swing service” to users at a gate point.
 - Note: A “shipper” could be the same company as a swing service provider but under the REMCo system treats them as separate entities.
- “consumer” means the customer who receives gas from a user at a “delivery point” (eg: households).

ALLOCATION, RECONCILIATION AND SWING (continued)

Introduction (Part 5.1):

- Fundamentals:
 - Swing Service applies when there are 2 or more pipelines interconnected with in a sub-network.
- Exemptions (Rule 171A):
 - Farm tap sub-networks;
 - Uncovered sub-networks; and
 - Sub-network that are connected to a single pipeline.
- Shipper Register (Rule 173):
 - Register of shippers and swing service providers that REMCo maintains.
 - Listing requests.

ALLOCATION, RECONCILIATION AND SWING (continued)

Introduction (Part 5.1) (continued):

- Only one notional gate point per pipeline for each sub-network (Rule 174):
 - If there are more than one physical point of interconnection, then they are aggregated into a single (notional) gate point.
- Gate Point control systems (Rule 175):
 - Four types:
 - pressure control;
 - flow profile control;
 - flow ratio control; or
 - market responsive flow control.
 - The pipeline operator must provide 20 days notice to REMCo if changing
 - Other conditions are stipulated.

ALLOCATION, RECONCILIATION AND SWING (continued)

Introduction (Part 5.1) (continued):

- Pressure control
 - A pressure control pipeline is set to maintain the sub-network at a constant pressure.
 - The exact amount of gas injected may be more or less than shippers have instructed.
 - The DBNGP is the pressure controlled pipeline.
- Flow profile control
 - A flow profile control pipeline injects a precise quantity of gas into a sub-network in accordance with instructions from shippers.
 - The Parmelia Pipeline is a flow controlled pipeline operated by APA.

ALLOCATION, RECONCILIATION AND SWING (continued)

Introduction (Part 5.1) (continued):

- Type of pipeline control system (Rule 176)
 - Notice to REMCo from Pipeline Operator under rule 175 in relation to sub-network operating with one pressure control pipeline and one flow profile control pipeline.
 - REMCo to provide profile and principles refer to in rule 200
 - See slide 33 for further details on the various published profiles.
 - User to procure its related shipper or swing service provider for the flow profile control pipeline to select a profile for the operation of the flow profile control

ALLOCATION, RECONCILIATION AND SWING (continued)

Introduction (Part 5.1) (continued):

- Type of pipeline control system (Rule 176) continued:
 - REMCo must calculate the ratio described below.

$$R = \frac{\sum UPNA_F}{\sum UPNA_P}$$

where:

- R = the Ratio for a flow ratio control pipeline for the sub-network for the gas day;
- UPNA_F = the User's Pipeline Nomination Amount for the Flow ratio control pipeline notified under rule 197(2) for each user for the sub-network; and
- UPNA_P = the User's Pipeline Nomination Amount for the Pressure control pipeline notified under rule 197(2) for each user for the sub-network.

- Changes intra day are outlined in Rule 176

ALLOCATION, RECONCILIATION AND SWING (continued)

User Obligations (Part 5.2):

- Procurement (Rule 178):
 - Nominations equal the estimated users required withdrawals
 - Submit user allocation instructions that reflect the gas requirement from each pipeline.
- User can inject a negative amount of gas (Rule 180).
- Minimise the contribution of swing service (Rule 181).
- Keep sub-networks pressurised (Rule 182).

ALLOCATION, RECONCILIATION AND SWING (continued)

User Obligations (Part 5.2) (continued):

- Renominations and changes in shippers right to inject gas (Rule 184):
 - User to provide notice to REMCo and provide a new user allocation instruction (UAI).
- User to procure shippers nomination (Rule 186):
 - to ensure the Users obligation to inject gas are met;
 - the shipper may aggregate its nominations to reflect the fact they are supplying more than one User.

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocation instruction (Part 5.3):

- Users allocation instructions (Rule 188).
 - At least 2 business days before the gas day or future gas days, users must provide an allocation instruction to REMCo.
 - On the gas day, users can provide an updated allocation instruction, up to 3.5 hrs after end of gas day. (with some limitations such as not to vary more than 10%)
 - Allocation instruction can be expressed in:
 - Percentage;
 - Quantity; or
 - Combination.

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocation instruction (Part 5.3) (continued):

- Validity of allocation instruction (Rule 191).
 - REMCo validates a user's allocation instruction (UAI).
 - whether the allocations are capable of being applied to all the user's gas injections to a shipper; and
 - the shipper is shipper register for that user.
- If a UAI is invalid, (Rule 192).
 - REMCo will use the latest valid UAI.
 - May not provide the best outcome and potentially result in Swing Service.

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocation instruction (Part 5.3) (continued):

- User warranties (Rule 193):
 - User warrant that they have;
 - sufficient contractual entitlements to inject gas; and
 - have a haulage contract for with the network operator.
- Fallback user-shipper agreement (Rule 194):
 - A **shipper** is deemed to make an irrevocable offer to the user to enter into a fallback user-shipper agreement set out in Appendix 8.
 - Further the **user** is deemed to have irrevocably accepted the offer and the user and the shipper become parties to the fallback agreement.

ALLOCATION, RECONCILIATION AND SWING (continued)

Before the start of the gas day (Part 5.4):

- Shipper's nominations apply only to extent accepted (Rule 194):
 - The amount of a shipper's or swing service provider's nomination or renomination is only accepted in so far as the contracts with the Pipeline permits.
- User to procure standing nominations (Rule 195):
 - User are obligated to ensure that the shippers have in place a standing nomination to the pipeline operators.
- User's amount of a shipper's nomination (Rule 196):
 - User must agree with the shipper the "user's amount" of the shipper's nomination.

ALLOCATION, RECONCILIATION AND SWING (continued)

Before the start of the gas day (Part 5.4) (continued):

- User's pipeline nomination amount (Rule 197):

"user's pipeline nomination amount" =

 - user's amounts of its related shipper's (calculated under Rule 196)
 - + the user's swing service repayment quantities for the gate point for the gas day as notified by REMCo under Rule 300 (Swing Service obligations)
- Users must notify the REMCo at least 18 hours before the start of the gas day.

ALLOCATION, RECONCILIATION AND SWING (continued)

Before the start of the gas day (Part 5.4) (continued):

- REMCo determines profiles (Rule 200):
 - Profiles are determined by guidelines that set out the principles on which the profiles referred.
- REMCo publishes profiled daily nominations (Rule 199):
 - At least 2 hours before the gas day:
 - Profiled pipeline nominations; and
 - Profiled sub-network nominations

ALLOCATION, RECONCILIATION AND SWING (continued)

During the gas day (Part 5.5):

- Pipeline operators to provide hourly data to REMCo (Rule 210)
 - Within 30 minutes after the end of the hour:
 - Provide the as-retrieved energy inflow data for the gate point for each hour.
- REMCo's intra-day reporting (Rule 211):
 - Within 60 minutes after the end of the hour:
 - provide each user and pipeline operator the as-retrieved energy inflow data, energy inflow data aggregated across all gate points and profiled nomination published by REMCo before the start of the gas day (Rule 199) and (Rule212).
- If no hourly data provided by the pipeline operators, REMCo is not required to make the data available.

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocation (Part 5.6):

- ❖ **Key Concept.**
- **User's estimated total withdrawals (Rule 228)**

User Estimated Total Withdrawals

$$UETW = UIW + UEBW + UUAFG + URAA + \Sigma SRQ.$$

The components of which are explained in detail in the following slides.

- The UETW represents the total of the Users obligations to its shippers and swing service providers for the gas day.
- The URAA component is derived from the forward reconciliation processes that looks back into the historical period of the past 425 days.

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocation (Part 5.6) (continued):

- **User's estimated total withdrawals (Rule 228) (continued):**

User Estimated Total Withdrawals

$$UETW = UIW + UEBW + UUAFG + URAA + \Sigma SRQ.$$

Where:

- UIW = the User's Interval-metered Withdrawals (See Rule 222);
- UEBW = the User's Estimated Total Basic-metered Withdrawals (See Rule 227);
- UUAFG = UAFG supplied under Rule 229;
- URAA = the User's Reconciliation Adjustment Amount notified under Rule 243.
- SRQ = is Swing service Repayment Quantity (See Rule 299).

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocation (Part 5.6) (continued):

- The following calculations are performed by REMCo under 5.6 to determine the Users Estimated Total Withdrawals UETW.
 - Pipeline Corrected Injections (PCI);
 - Total Corrected Injections (TCI);
 - User Interval meter Withdrawals (UIW);
 - Net System Load (NSL);
 - Raw Estimate of Basic metered Withdrawals (REBW);
 - Normalisation factor (NF);
 - Estimated basic-metered Withdrawal (EBW);
 - User's Estimated basic-metered Withdrawals (UEBW); and
 - Un-Accounted For Gas (UAFG)

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocation (Part 5.6) (continued):

✓ PRESENTATION CHECK POINT.

- Do you want to proceed with a detailed explanation of the supporting calculation that make up User Estimated Total Withdrawals ?
 - Yes , continue to next slide.
 - No, move to slide 50.

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocation (Part 5.6) (continued):

- Estimate of unaccounted for gas (Rule 229)
 - Within 3.5 hours after gas day the Network Operator provides REMCo the estimated UAFG.
 - The User is the supplier of the UAFG
- REMCo calculates actual UAFG (Rule 230)

Actual UAFG

$$UAFG = \sum PI - \sum UIW - \sum UBW$$

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocation (Part 5.6) (continued):

- Pipeline injections (Rule 220)
 - For each gate point and each for gas day REMCo calculates:

Pipeline Corrected Injections

$$PCI = PI + GAA$$

Where:

- PCI = Pipeline Corrected Injections
- PI = Pipeline Injections (See Rule 152 and 220).
- GAA = Gate-point Adjusted Amount (See Rule 243).

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocation (Part 5.6) (continued):

- Total corrected injections (Rule 221):

Total Corrected Injections

$$TCI = \sum PCI - \sum SRQ - \sum URRR$$

Where:

- TCI = Total Corrected Injections;
- PCI = Pipeline Corrected Injections (See Rule 220);
- SRQ = Swing service Repayment Quantity (See Rule 229);
- URRA = the User's Reconciliation Adjustment Amount for historical adjustments (See Rule 243).

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocation (Part 5.6) (continued):

- User's Interval-Metered Withdrawals (Rule 222):

User's Interval-metered Withdrawals

$$UIW = \sum IW$$

Where:

- UIW = User's Interval meter Withdrawals
- IW = Interval-metered Withdrawals (See Rule 158).

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocation (Part 5.6) (continued):

- Net system load (Rule 223):
 - NSL is the estimated withdrawals for all basic-metered delivery points in the sub-network

Net System Load

$$NSL = TCI - \sum UIW - \sum EUAFG$$

Where:

- NSL = Net System Load;
- TCI = Total Corrected Injections (See Rule 221);
- UIW = User Interval metered withdrawals (See Rule 222); and
- EUAFG = the Estimated Unaccounted For Gas (See Rule 229 and 238).

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocation (Part 5.6) (continued):

- Raw estimate of basic-metered delivery points withdrawals (Rule 224):

Raw Estimated Basic meter Withdrawals

$$REBW = \frac{\sum DABW_h + \sum EBW_h}{\sum NSL_h} \times NSL$$

Where:

- $\sum DABW_h$ = the sum of the distributed actual basic-metered withdrawals in the period from gas day D-410 to gas day D-321 (See Rule 232);
- $\sum EBW_h$ = the sum of estimated basic-metered withdrawal (eg unavailable in the period from gas day D-410 to gas day D-321) (See Rule 226).

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocation (Part 5.6) (continued):

- (Rule 224) continued...

Raw Estimated Basic meter Withdrawals

- $\sum NSL_h$ = the sum of the net system load for the sub-network for each gas day in the period from gas day D-410 to gas day D-321 inclusive, (See Rule 223); and
- NSL = the net system load for the sub-network for gas day D calculated under Rule 223.

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocation (Part 5.6) (continued):

- Normalisation factor for estimate of basic-metered delivery points withdrawals (Rule 225)

Normalisation Factor

$$NF = \frac{NSL}{\sum REBW}$$

Where:

NSL = the Net System Load (See rule 223);

REBW = Raw Estimated Basic meter Withdrawal (See 224).

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocation (Part 5.6) (continued):

- Estimated basic-metered withdrawal for each basic-metered delivery point (Rule 226):

Estimated Basic-metered Withdrawal

$$EBW = REBW \times NF$$

Where:

REBW = Raw Estimated Basic meter Withdrawal (See Rule 224);

NF = Normalisation Factor (See Rule 225)

- The application of the NF ensures that the Basic Meters are allocated to the total of the NSL not more or less.

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocation (Part 5.6) (continued):

- User's estimated basic-metered withdrawals (Rule 227):

User Estimated Basic-metered Withdrawal

$$UEBW = \sum EBW$$

Where:

EBW = Estimated Basic meter Withdrawal (See Rule 226)

ALLOCATION, RECONCILIATION AND SWING (continued)

This concludes Part 5.6 (Allocation)

- To summarise Allocation
 - Each day all injections into the market are withdrawn from the market.
 - REMCo allocates withdrawals for the sub-network to users.
 - REMCo determines each user's estimated total withdrawal for each day.

ALLOCATION, RECONCILIATION AND SWING (continued)

Introduction to Part 5.7 (Reconciliation).

- To set the scene.
 - Reconciliation is a forward process (Estimations or errors used for today's allocations are fixed over the 28 days following the day after tomorrow).
 - Each day, each user's estimated total withdrawals (UETW) contains an amount to account for data changes from the past 425 days.
 - Total Reconciliation Amount (TRA) => URAA which is TRA/28).

ALLOCATION, RECONCILIATION AND SWING (continued)

Reconciliation (Part 5.7) (continued):

- ❖ **Key Concept.**
- **Total reconciliation amount for a user (Rule 242)**
$$TRA = TBRA + TIRA + TBWRA + UUAFGRA + \sum MRA$$

Where:
TRA = the user's Total Reconciliation Amount for the sub-network for gas day D;
TBRA = the user's total basic-meter reconciliation amount for the sub-network for gas day D calculated under rule 235; and
TIRA = the user's total interval-meter reconciliation amount for the sub-network for gas day D calculated under rule 236.

ALLOCATION, RECONCILIATION AND SWING (continued)

Reconciliation (Part 5.7) (continued):

- REMCo notifies reconciliation and adjustment amounts (Rule 244):
 - One day after the gas day REMCo provides the User and Network operator the following for each sub network:
 - Total Reconciliation Amount (TRA);
 - Miscellaneous Reconciliation Amount (MRA) (if applicable);
 - User Reconciliation Adjusted Amount (URAA);
 - User delta Summed Basic meter Reconciliation Amount (U Δ SBRA);
 - User delta Basic meter Withdrawal Reconciliation Amount (U Δ BWRA);
 - Normalisation Factor (NF);
 - Net System Load (NSL); and
 - User Basic Meter Withdrawal (UBW).

ALLOCATION, RECONCILIATION AND SWING (continued)

Reconciliation (Part 5.7) (continued):

- REMCo notifies reconciliation and adjustment amounts (Rule 244) (Continued):
 - One day after the gas day REMCo provides the Network Operator and the Pipeline Operator the following for each sub-network:
 - Total delta Pipeline Injections (T Δ PI);
 - Gate point Adjustment Amount (GAA).
 - One day after the gas day REMCo provides the Network Operator and the Pipeline Operator the following for each Gate point:
 - Pipeline Injections (PI);
 - Pipeline Corrected injections (PCI).

ALLOCATION, RECONCILIATION AND SWING (continued)

Reconciliation (Part 5.7) (continued):

- Following Components are used to calculate Total Reconciliation Amount (TRA) for each user in each Sub-Net:
 - Distributed actual basic-metered withdrawal (DABW).
 - User's summed basic-meter reconciliation amount (SBRA)
 - User's delta summed basic-meter reconciliation amount (Δ SBRA_{i D})
 - User's total interval-meter reconciliation amount (TIRA)
 - User's total basic-meter withdrawal reconciliation amount for transfers and pipeline gate point reconciliation (TBWRA)
 - Total delta pipeline injection (TDPI)
 - User's daily unaccounted for gas reconciliation amount (UDURA)
 - User's unaccounted for gas reconciliation amount (UUAFGRA)

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocation (Part 5.7) (continued):

✓ PRESENTATION CHECK POINT.

- Do you want to proceed with a detailed explanation of the supporting calculation that make up Reconciliation?
 - Yes , continue to next slide.
 - No, move to slide 78.

ALLOCATION, RECONCILIATION AND SWING (continued)

Reconciliation (Part 5.7) (continued):

- REMCo calculates adjustment amounts (Rule 243)

Step 1:

$$URAA_D = \sum_{i=D-(X-1)}^D \frac{TRA_i}{X}$$

Where:

- URAA_D = the User's Reconciliation Adjustment amount for the sub-network for gas day D;
- TRA_i = the user's total reconciliation amount for the sub-network for gas day i calculated under rule 242;
- i = the number of a gas day from gas day D-(X-1) to gas day D;
- X = a variable (28).

ALLOCATION, RECONCILIATION AND SWING (continued)

Reconciliation (Part 5.7) (continued):

- REMCo calculates adjustment to the allocated injections (Rule 220) which impacts NSL & therefore allocations for basic meters.

Step 2:

$$GAA^D = \sum_{i=D-(X-1)}^D \frac{T\Delta PI_i^D}{X}$$

Where:

- GAA^D = the gate point adjustment amount for the gate point for gas day D;
- TΔPI^D = the total delta pipeline injection for the gate point for gas day i calculated under rule 238(4);
- i = the number of a gas day from gas day D-(X-1) to gas day D; and
- X = a variable (28).

ALLOCATION, RECONCILIATION AND SWING (continued)

Reconciliation (Part 5.7) (continued):

- REMCo calculates adjustment amounts (Rule 243) (continued)

Step 3:

$$UUAFGRAA_D = \sum_{i=D-(X-1)}^D \frac{UUAFGRA_i}{X}$$

Where:

- UUAFGRAA_D = the User's UnAccounted For Gas Reconciliation Adjustment Amount for the sub-network for gas day D;
- UUAFGRA_i = the user's unaccounted for gas reconciliation amount for the sub-network for gas day i calculated under rule 241;
- i = the number of a gas day from gas day D – (X-1) to gas day D; and
- X = a variable (28).

ALLOCATION, RECONCILIATION AND SWING (continued)

Reconciliation (Part 5.7) (continued):

- Calculate distributed actual basic-metered withdrawal (DBAW) (Rule 232):
 - o **First step** to calculate the DBAW is to calculate the **NSL factor**

$$NSLF_i = \frac{NSL_i}{\sum NSL}$$

Where:

- NSLF_i = is the Net System Load Factor for the sub-network for gas day i;
- i = a gas day in the metering period;
- NSL_i = the Net System Load for the sub-network for gas day i calculated under Rule 223; and
- NSL = the net system load for the sub-network for each gas day in the metering period calculated under rule 223.

ALLOCATION, RECONCILIATION AND SWING (continued)

Reconciliation (Part 5.7) (continued):

- Calculate distributed actual basic-metered withdrawal (Rule 232) (continued):
 - o **Second step** to calculate the DBAW_i for each basic meter for each gas day.

$$DABW_i = NSLF_i \times AQ$$

Where:

- DABW_i = the Distributed Actual Basic-metered Withdrawal for the basic-metered delivery point for gas day i;
- AQ = energy quantity of gas shown by the latest read as being withdrawn at the basic-metered delivery point during the metering period.

ALLOCATION, RECONCILIATION AND SWING (continued)

Reconciliation (Part 5.7) (continued):

- Calculate user's summed basic-meter reconciliation amount (Rule 233):
 - **First step** to calculate the SBRA is to calculate the BRA
 - The difference between Estimated BM allocation and distributed actual reading
- $BRA = DBRA - EBW$
- Where:
- BRA = the **B**asic-meter **R**econciliation **A**mount for the basic-metered delivery point for historical gas day i ;
 - $DABW$ = the **D**istributed **A**ctual **B**asic-metered **W**ithdrawal for the basic-metered delivery point for gas day i calculated under Rule 232;
 - EBW = the **E**stimated **B**asic-metered **W**ithdrawal for the basic metered delivery point for gas day i calculated under Rule 226; and
 - i = a historical gas day i in the range of gas day D-1 to gas day D-425.

ALLOCATION, RECONCILIATION AND SWING (continued)

Reconciliation (Part 5.7) (continued):

- Calculate user's summed basic-meter reconciliation amount (Rule 233) continued:
 - Note if the DABW under Rule 232 is not calculated then $BRA = 0$
 - Second step to calculate the SBRA
- $SBRA = \Sigma BRA$
- Where:
- $SBRA$ = the user's **S**ummed **B**asic-meter **R**econciliation **A**mount for the sub-network for historical gas day i for gas day D ; and
 - BRA = the **B**asic-meter **R**econciliation **A**mount for each of the user's basic-metered delivery points in the sub-network for historical gas day i for gas day D , calculated for each basic-metered delivery point.

ALLOCATION, RECONCILIATION AND SWING (continued)

Reconciliation (Part 5.7) (continued):

- Calculate user's delta summed basic-meter reconciliation amount (Rule 234)
- $\Delta SBRA_i^D = SBRA_i^D - SBRA_{i-1}$
- Where:
- $\Delta SBRA_i^D$ = the user's **D**elta **S**ummed **B**asic-meter **R**econciliation **A**mount for the sub-network for historical gas day i for gas day D ;
 - $SBRA_i^D$ = the user's summed basic-meter reconciliation amount for the sub-network for historical gas day i for gas day D calculated under Rule 233;
 - $SBRA_{i-1}^{D-1}$ = the user's summed basic-meter reconciliation amount for the sub-network for historical gas day i for gas day D-1 calculated under Rule 233; and
 - i = a historical gas day i in the range of gas day D-1 to gas day D-425.

ALLOCATION, RECONCILIATION AND SWING (continued)

Reconciliation (Part 5.7) (continued):

- Calculate user's total basic-meter withdrawal reconciliation amount for transfers and pipeline gate point reconciliation (Rule 237) – Step 2

$$TBWRA = \sum_{i=D-425}^{D-1} (\Delta BWRA_i^D)$$

Where:

- TBWRA = the user's Total Basic-meter Withdrawal Reconciliation Amount for the sub-network for gas day D;
- $\Delta BWRA_i^D$ = the user's delta basic-meter withdrawal reconciliation amount for the sub-network for historical gas day i for gas day D; and
- i = a historical gas day i in the range of gas day D-1 to gas day D-425.

ALLOCATION, RECONCILIATION AND SWING (continued)

Reconciliation (Part 5.7) (continued):

- Calculate total delta pipeline injection (Rule 238).

Step 1:

$$\Delta PI_i^D = PI_i^D - PI_i^{D-1}$$

Where:

- ΔPI_i^D = the delta Pipeline Injection for the gate point for each historical gas day i for gas day D;
- PI_i^D = the pipeline injection for the gate point for a historical gas day i for gas day D under Rule 220(1);
- PI_i^{D-1} = the pipeline injection for the gate point for a historical gas day i for gas day D-1 under Rule 220(1); and
- i = a historical gas day i in the range of gas day D-425 to gas day D-1.

ALLOCATION, RECONCILIATION AND SWING (continued)

Reconciliation (Part 5.7) (continued):

- Calculate total delta pipeline injection (Rule 238)

Step 2:

$$T\Delta PI^D = \sum_{i=D-425}^{D-1} (\Delta PI_i^D)$$

Where:

- $T\Delta PI^D$ = the Total delta Pipeline Injection for the gate point for each historical gas day i for gas day D;
- ΔPI_i^D = the delta pipeline injection for the gate point for a historical gas day i for gas day D under rule 220(1); and
- i = a historical gas day i in the range of gas day D-425 to gas day D-1.

ALLOCATION, RECONCILIATION AND SWING (continued)

Reconciliation (Part 5.7) (continued):

- Miscellaneous reconciliation amount (Rule 239):
 - For each sub-net REMCo may determine one or Miscellaneous Reconciliation Amounts.

ALLOCATION, RECONCILIATION AND SWING (continued)

Reconciliation (Part 5.7) (continued):

- Calculate user's daily unaccounted for gas reconciliation amount (Rule 240):

$$T\Delta SBRA^D = \sum_{\text{all users}} (\Delta SBRA^D)$$

Where:

$T\Delta SBRA^D$ = the Total delta Basic-meter Reconciliation Amount for the sub-network for historical gas day i for gas day D; and

$\Delta SBRA^D$ = the user's delta summed basic-meter reconciliation amount for the sub-network for historical gas day i calculated under Rule 234 for gas day D.

ALLOCATION, RECONCILIATION AND SWING (continued)

Reconciliation (Part 5.7) (continued):

- Calculate user's daily unaccounted for gas reconciliation amount (Rule 240) (continued):

$$\Delta UAFG^D = EUAFG^D - EUAFG^{D-1}$$

Where:

$\Delta UAFG^D$ = the delta UnAccounted For Gas for the sub-network for historical gas day i for gas day D;

$EUAFG^D$ = the EUAFG for the sub-network for historical gas day i for gas day D provided to REMCo under rule 229(1) or 238(2), as applicable; and

$EUAFG^{D-1}$ = the EUAFG for the sub-network for historical gas day i for gas day D -1 provided to REMCo under rule 229(1) or 238(2), as applicable.

ALLOCATION, RECONCILIATION AND SWING (continued)

Reconciliation (Part 5.7) (continued):

- Calculate user's daily unaccounted for gas reconciliation amount (Rule 240) (continued):

$$UDURA_u^D = \frac{UUAFG_u}{\sum_{\text{All users}} UUAFG_u} \times (\Delta UAFG_i^D - T\Delta SBRA^D)$$

Where:

- $UDURA_u^D$ = the User's Daily Unaccounted for gas Reconciliation Amount for user u for historical gas day i for gas day D; and
- $UUAFG_u$ = the user's unaccounted for gas for user u for gas day D notified under Rule 229.

ALLOCATION, RECONCILIATION AND SWING (continued)

Reconciliation (Part 5.7) (continued):

- Calculate user's daily unaccounted for gas reconciliation amount (Rule 240) (continued):

- $\Delta UAFG_i^D$ = the delta unaccounted for gas for the sub-network for historical gas day i for gas day D calculated under rule 240(2);
- $T\Delta SBRA^D$ = the total delta basic-meter reconciliation amount for the sub-network for historical gas day i for gas day D;
- i = a historical gas day i in the range of gas day D-1 to gas day D-425.

Provided that $\sum_{\text{all users}} UUAFG_u = 0$

ALLOCATION, RECONCILIATION AND SWING (continued)

Reconciliation (Part 5.7) (continued):

- User's unaccounted for gas reconciliation amount (Rule 241):

$$UUAFG_{GRA} = \sum_{i=D-425}^{D-1} UDURA_i^D$$

Where:

- $UUAFG_{GRA}$ = the User's UnAccounted for Gas Reconciliation Amount for the sub-network for gas day D; and
- $UDRA$ = the user's daily unaccounted for gas reconciliation amount for the sub-network for historical gas day i for gas day D calculated under Rule 240.

ALLOCATION, RECONCILIATION AND SWING (continued)

Reconciliation (Part 5.7) (continued):

- Timing of adjustment amounts and injection of reconciliation amount (Rule 245).
 - User must URAA calculated include the amount procured under Rule 178 for injection on gas day plus 2.

ALLOCATION, RECONCILIATION AND SWING (continued)

This concludes Part 5.7 (Reconciliation) (continued):

- To summarise Reconciliation:
 - For each gas day a user's UETW contains an amount to adjust for data corrections.
 - Reconciliation is a forward process (past errors are fixed through future adjustments).
 - REMCO calculates reconciliation amounts by calculating "deltas" in the GRMS data over the past 425 days
 - Reconciliation adjustments are smeared over 28 days to remove spikes.

ALLOCATION, RECONCILIATION AND SWING (continued)

Introduction to Part 5.8 (Deemed Injections).

- The Rules provide for REMCO calculations to be used by the Pipeline and Shippers for the allocation of gas injected into each subnet from the pipeline and is used by the Pipeline and Shippers to settle their contracts
- Following calculation are performed by REMCO under 5.8.
 - Shipper Deemed Injections.
 - User Deemed Withdrawals for a Pipeline.

ALLOCATION, RECONCILIATION AND SWING (continued)

Introduction to Part 5.9 (Delivery point apportionment and hourly gate point apportionment).

- Where REMCo receives hourly metering across the day it must:
 - Calculate each Users withdrawal profile for the day in each subnet (Rule 252(1)); and
 - Calculate each Shippers injection profile for the day in each subnet. (Rule 252(2))
 - If no hourly data received no requirement to provide profiles remains on REMCo.

ALLOCATION, RECONCILIATION AND SWING (continued)

Introduction to Part 5.10 (Calculation Swing Service)

- What is Swing?
 - Swing occurs only in a sub-network which is supplied by two Pipelines;
 - One pipeline needs to be a pressure controlled pipe (PCP) and the other a flow controlled pipe (FCP):
 - PCP is one where the injection rate over the day is set to maintain a certain inlet pressure to the subnet
 - FCP is one that over the day delivers a set amount of gas (within tolerances)
 - Swing is the difference between what was ordered by a user on one pipe and was delivered to users customers from the other pipeline

ALLOCATION, RECONCILIATION AND SWING (continued)

Calculation swing service (part 5.10) (continued):

❖ Key Concept.

- Calculate swing service on pipeline (Rule 256).

$$SS = \left| \sum UDW(OP) - PCI(OP) \right|$$

Where:

- SS = the Swing Service for the gate point for the gas day
- UDW(OP) = each User's Deemed Withdrawals for the other gate point for the sub-network for the gas day calculated under rule 248;
- PCI(OP) = the Pipeline Corrected Injections for the other gate point for the sub-network for the gas day calculated under rule 220(2).

- Note: If the swing service for a gate point for a gas day is:
 - is a positive number, the swing service is **loan swing service**; and
 - is a negative number, the swing service is **park swing service**.

ALLOCATION, RECONCILIATION AND SWING (continued)

Eight Calculation steps to allocate swing to a User:

- | | |
|--|--|
| <p>1. Swing Base Amount (SBA)
 $SBA = Users - Noms$</p> <p>2. User's SS Error (SE)
 $SE = Noms - UDW$</p> <p>3. User's Specific Swing Error (USSE)
 $USSE = (0, SE - (20\% \times SBA))$</p> <p>4. Total User's SS (USS)
 $USS = \frac{ UETW }{\sum UETW } \times SS$</p> <p>5. User's Specific Swing Amount (USA)
 $USA = \frac{ USSE }{\sum SE } \times USS$</p> | <p>6. Total User Specific Swing Amount (TUSA)
 $TUSA = \sum USA$</p> <p>7. Total User Specific SS Amounts (TUNUSA)
 $TUNUSA = SS - TUSA$</p> <p>8. Non-User Specific SS amount (NUSA)
 $NUSA = \frac{ UETW }{\sum UETW } \times TUNUSA$</p> |
|--|--|

ALLOCATION, RECONCILIATION AND SWING (continued)

Calculation swing service (part 5.10) (continued)

- ❖ Key Concept.
- First and second gas delivered (Rule 253)
 - Gas injected or repaid into a sub-network by or on behalf of the user is allocated:
 - First, deemed to be User's swing service repayment (SRQ);
 - Second deemed to be User's reconciliation adjustment; and
 - Remainder gas available to satisfy user withdrawals.

ALLOCATION, RECONCILIATION AND SWING (continued)

Calculation swing service (part 5.10) (continued):

- ✓ PRESENTATION CHECK POINT.
 - Do you want to proceed with a detailed explanation of the supporting calculation that make up swing service?
 - Yes, continue to next slide.
 - No, move to slide 101.

ALLOCATION, RECONCILIATION AND SWING (continued)

Calculation swing service (Part 5.10) (continued):

- Calculate swing base amount (Rule 259)

$$SBA = |UPNA|$$

Where:

- SBA = the user's **Swing Base Amount** for the gate point for the gas day; and
- UPNA = the user's pipeline nomination amount for the gate point for the gas day calculated under rule 197

ALLOCATION, RECONCILIATION AND SWING (continued)

Calculation swing service (Part 5.10) (continued):

- Determine swing errors (Rule 260)

$$SE = |UPNA - UDW|$$

Where:

- SE = the user's **Swing Error** for the gate point for the gas day;
- UPNA = the user's pipeline nomination amount for the gate point for the gas day calculated under rule 19; and
- UDW = the user's deemed withdrawals for the gate point for the gas day calculated under rule 248.

ALLOCATION, RECONCILIATION AND SWING (continued)

Calculation swing service (Part 5.10) (continued):

- Calculate each user's user-specific swing error (Rule 261)

$$USSE = \max[0, SE - (A \times SBA)]$$

Where:

- USSE = the user's **User-Specific Swing Error** for the gate point for the gas day;
- SE = the user's **Swing Error** for the gate point for the gas day;
- A = variable (20%), and
- SBA = the user's **Swing Base Amount** for the gate point for the gas day.

ALLOCATION, RECONCILIATION AND SWING (continued)

Calculation swing service (Part 5.10) (continued):

- Calculate each user's total (pre-procurement) swing service (Rule 262):

$$USS = \frac{|UETW|}{\sum |UETW|} \times SS$$

Where:

USS = the User's total (pre-procurement) **S**wing **S**ervice for the gate point for the gas day, which is either loan swing service or park swing service;

UETW = the absolute value of the user's estimated total withdrawals for the sub-network for the gas day calculated under rule 228;

ALLOCATION, RECONCILIATION AND SWING (continued)

Calculation swing service (Part 5.10) (continued):

- Calculate each user's total (pre-procurement) swing service (Rule 262) (continued):

$\sum UETW$ = the sum of the absolute value of each user's estimated total withdrawals for all users in the sub-network for the gas day calculated under rule 228; and

SS = the swing service for the gate point for the gas day calculated under rule 256, which under rule 256(2) is either loan swing service or park swing service.

ALLOCATION, RECONCILIATION AND SWING (continued)

Calculation swing service (Part 5.10) (continued):

- Calculate each user's user-specific amount of swing service (if any) (Rule 263):

$$USA = \frac{\sum_{GP} |UETW|}{\sum_{GP} |SE|} \times USS$$

Where:

USA = the user's user-specific amount of swing service for the gate point for the gas day;

USSE = each of the user's user-specific swing errors for each gate point for the sub-network for the gas day calculated under rule 261;

SE = each of the user's swing errors for each gate point for the sub-network for the gas day calculated under rule 260;

USS = the user's total (pre-procurement) swing service for the gate point for the gas day calculated under rule 262 .

ALLOCATION, RECONCILIATION AND SWING (continued)

Calculation swing service (Part 5.10) (continued):

- Calculate the total of all users' user-specific amounts of swing service (Rule 264):

$$TUSA = \sum USA$$

Where:

- TUSA = the Total of all user's User-Specific Amounts of swing service for the gate point for the gas day; and
- $\sum USA$ = the user-specific amount of swing service for each user for the gate point for the gas day calculated under rule 263.

ALLOCATION, RECONCILIATION AND SWING (continued)

Calculation swing service (Part 5.10) (continued):

- Calculate total non-user-specific pre-procurement amount of swing service (Rule 265):

$$TUNUSA = SS - TUSA$$

Where:

- TUNUSA = the Total of all Users' Non-User-Specific Amounts of swing service for the gate point for the gas day;
- SS = the swing service for the gate point for the gas day calculated under rule 256; and
- TUSA = the total of all users' user-specific amounts of swing service for the gate point for the gas day calculated under rule 264.

ALLOCATION, RECONCILIATION AND SWING (continued)

Calculation swing service (Part 5.10) (continued):

- Calculate each user's non-user-specific pre-procurement amount of swing service (Rule 266) :

$$NUSA = USS - USA$$

Where:

- NUSA = the user's Non-User-Specific Amount of swing service for the gate point for the gas day;
- USS = the user's total (pre-procurement) swing service for the gate point for the gas day calculated under rule 262; and
- USA = the user's user-specific amount of swing service for the gate point for the gas day calculated under rule 263.

ALLOCATION, RECONCILIATION AND SWING (continued)

Calculation swing service (Part 5.10) (continued):

- To summarise Swing Service:
 - Provide a mechanism in a sub net with two transmission pipelines supplies to:
 - Match contractual arrangements by which the User procures gas for delivery into the sub-net; and
 - Match the end customer withdrawal with the Users deemed withdrawals.

ALLOCATION, RECONCILIATION AND SWING (continued)

Introduction to Part 5.11 (Off-Market Swing Service Procurement).

- Users have a choice to manage SS either on or off market:
 - Off Market: register an arrangement to settle SS with a SSP bilaterally;
 - On market rely on the SSP Deeds in the Rules to establish a contract with a SSP and use the SS bid stack to price the service; and
 - A combination of both.

ALLOCATION, RECONCILIATION AND SWING (continued)

Off-Market Swing Service Procurement (Part 5.11):

- Off-market swing service procurement instruction (PI)(Rule 267)
 - Notice provided to REMCo of off market contract.
- Swing service provider gives REMCo off-market swing service procurement confirmation (Rule 268)
 - SSP provide confirmation of off market contract.
- REMCo validates users' procurement requests and provides status report (Rule 269)
 - REMCo then matches PI's with confirmations from SSPs before they are applied.

ALLOCATION, RECONCILIATION AND SWING (continued)

**Off-Market Swing Service Procurement (Part 5.11)
(Continued):**

- REMCo to calculate off-market swing service procurement – applied requests
 - Applies the PIs to Users non-user-specific swing first; and
 - The remainder of the PI value is then applied to the Users-Specific Swing amount.
- REMCo to calculate surplus swing service
 - What is left after all of the PIs have been exhausted.
- Adjust non-user-specific amounts for outcomes of off-market swing service procurement
 - Determine the net exposure to On Market Swing.

ALLOCATION, RECONCILIATION AND SWING (continued)

**Off-Market Swing Service Procurement (Part 5.11)
(Continued):**

- The following calculations are performed by REMCo under 5.11 to determine off-market swing service procurement.
 - Adjusted Non-User Specific Amount (ANUSA);
 - Total Adjusted Non-User Specific Amount (TANUSA);
 - Adjusted User Specific Amount (AUSA);
 - Total Adjusted User Specific Amount (TAUSA); and
 - Total Swing Service Bid Stack (TSSBS).

ALLOCATION, RECONCILIATION AND SWING (continued)

**Off-Market Swing Service Procurement (Part 5.11)
(Continued):**

✓ PRESENTATION CHECK POINT.

- Do you want to proceed with a detailed explanation of the supporting calculation that make up Off Market Swing Service Procurement?
 - Yes , continue to next slide.
 - No, move to [slide 112](#).

ALLOCATION, RECONCILIATION AND SWING (continued)

Off-Market Swing Service Procurement (Part 5.11) (continued):

- Adjust non-user-specific amounts for outcomes of off-market swing service procurement (Rule 272)

$$ANUSA = NUSA (PP) - NUSA (POM)$$

Where:

ANUSA = the user's **Adjusted Non-User-Specific Amount** of swing service for the gate point for the gas day;

NUSA (PP) = the user's non-user-specific (pre-procurement) amount of swing service for the gate point for the gas day calculated under rule 266;

NUSA (POM) = the amount of non-user-specific swing service that the user has procured off-market for the gate point for the gas day determined under rule 270.

ALLOCATION, RECONCILIATION AND SWING (continued)

Off-Market Swing Service Procurement (Part 5.11) (continued):

- Calculate users' total adjusted non-user-specific amounts (Rule 273)

$$TANUSA = \sum ANUSA$$

Where:

TANUSA = the Total of all users' **Adjusted Non-User-Specific Amounts** of swing service for the gate point for the gas day; and

$\sum ANUSA$ = each user's adjusted non-user-specific amount of swing service for the gate point for the gas day calculated under rule 272.

ALLOCATION, RECONCILIATION AND SWING (continued)

Off-Market Swing Service Procurement (Part 5.11) (continued):

- Adjust user-specific amounts for outcomes of off-market swing service procurement (Rule 274)

$$AUSA = USA - USA (POM)$$

Where:

AUSA = the user's **Adjusted User-Specific Amount** of swing service for the gate point for the gas day;

USA = the user's user-specific amount of swing service for the gate point for the gas day calculated under rule 263; and

USA(POM) = the user-specific amount of swing service that the user has procured off-market for the gate point for the gas day determined under rule 270.

ALLOCATION, RECONCILIATION AND SWING (continued)

Off-Market Swing Service Procurement (Part 5.11) (continued):

- Calculate users' total adjusted user-specific amounts (Rule 275)

$$TAUSA = \sum AUSA$$

Where:

- TAUSA = the Total of all users' Adjusted User-Specific Amounts of swing service for the gate point for the gas day; and
- AUSA = each user's adjusted user-specific amount of swing service for the gate point for the gas day calculated under rule 274.

ALLOCATION, RECONCILIATION AND SWING (continued)

Off-Market Swing Service Procurement (Part 5.11) (continued):

- Calculate total swing service to be procured through bid-stack (Rule 276)

$$TSS (BS) = TANUSA + TAUSA$$

Where:

- TSS (BS) = the Total amount of Swing Service to be procured through the applicable bid stack for the gate point for the gas day;
- TANUSA = the total of all users' adjusted non-user-specific amounts of swing service for the gate point for the gas day calculated under rule 273;
- TAUSA = the total of all users' adjusted user-specific amounts of swing service for the gate point for the gas day calculated under rule 275.

ALLOCATION, RECONCILIATION AND SWING (continued)

Off-Market Swing Service Procurement (Part 5.11) (continued):

- To summarise Off-Market Swing Service Procurement:
 - Is an instruction from the User to REMCo detailing the quantity of Swing Service gas the User has arranged to be supplied on a bi-lateral commercial basis.
 - This amount is subtracted from the Users aggregate Swing Service quantity:
 - initially from the non-user specific Swing Service amount, and then;
 - The residual off market procurement amount is subtracted from the Users User Specific Swing Service amount

ALLOCATION, RECONCILIATION AND SWING (continued)

Introduction to Part 5.12 (Allocating Swing Service in Bid Stack).

- Once the calculations for Off Market Swing have been completed REMCo then calculates the On Market Swing exposure

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocating Swing Service in Bid Stack (Part 5.12) (continued):

- Subscription for information (Rule 277)
 - Any person (member or non member can subscribe to get information regarding the Bid stack after the GD.
- Users appoint REMCo as agent for entering into SSPUDs etc (Rule 278)
 - Provides the ability for SSPs to make bids to the Bid stack.
- Swing service providers (Rule 279)
 - SS Provision Umbrella deeds are signed between REMCo and SSPs to manage the creation of contract notes between Users and SSPs where there is On market Swing.

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocating Swing Service in Bid Stack (Part 5.12).

- Swing Service Provider of Last Resort (SSPOLR) (Rule 280)
 - This arrangement is to manage the provision of SS that exceeds the available gas in the Bid Stack – SSPOLR.
- Swing service bids (Rule 281)
 - SSPs provide a Bid Book up to 1 year in advance and no later than 30 minutes before the start of the GD.
- Requirements for valid bid (Rule 282)
 - SSP has signed the SSPUD (umbrella deed);
 - Supplied within the time constraints;
 - Specifies the \$, quantity and whether it is Park or Loan; and
 - Specifies the max amount of SS Available.

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocating Swing Service in Bid Stack (Part 5.12).

- REMCo to publish bid stack (Rule 286)
 - 5 hours after the end of the Gas Day.
- Determine marginal clearing price for total amount of swing service to be procured through applicable bid-stack (Rule 287)
 - MCP is the intersect point between total SS to be procured on market and the price path.
- Determine marginal clearing price for adjusted non-user-specific amounts of swing service (Rule 288)
 - Is the Price that intersects with the total of all User's Non-User-specific Swing.

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocating Swing Service in Bid Stack (Part 5.12) (continued):

- The following calculations are performed by REMCo under 5.12 to allocate swing service in the bid stack.
 - Total Swing Service Cost (TSSC);
 - Total Non-User Specific Swing Service (TNUSAC);
 - Total User Specific Swing Service (TUSAC);
 - User Specific Swing Service (USAC);
 - Non User Specific Swing Service Cost (NUSAC);
 - User Cost (UC); and
 - Swing Service Fee (FSS).

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocating Swing Service in Bid Stack (Part 5.12) (continued):

✓ PRESENTATION CHECK POINT.

- Do you want to proceed with a detailed explanation of the supporting calculation that make up Allocating Swing Service in Bid Stack?
 - Yes , continue to next slide.
 - No, move to [slide 132](#)

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocating Swing Service in Bid Stack (Part 5.12) (continued):

- Calculate total swing service cost (all users) (Rule 289).

$$TSSC = MCP(TSS(BS)) \times TSS(BS)$$

Where:

- TSSC = the Total Swing Service Cost across all users for the gate point for the gas day;
- MCP(TSS(BS)) = the marginal clearing price for the total amount of swing service to be procured through the applicable bid stack for the gas day determined under rule 287; and
- TSS (BS) = the total amount of swing service to be procured through the applicable bid stack for the gate point for the gas day calculated under rule 276.

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocating Swing Service in Bid Stack (Part 5.12) (continued):

- Calculate total non-user-specific swing service cost (all users) (Rule 290)

$$TNUSAC = MCP (ANUSA) \times TANUSA$$

Where:

- TNUSAC = the Total user-specific swing service cost across all users for the gate point for the gas day;
- MCP(ANUSA) = the marginal clearing price for the total amount of all adjusted non-user-specific amounts of swing service to be procured through the applicable bid stack for the gas day determined under rule 288;
- TANUSA = the total of all users' adjusted non-user-specific amounts of swing service for the gate point for the gas day calculated under rule 273.

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocating Swing Service in Bid Stack (Part 5.12) (continued):

- Calculate total user-specific swing service cost (all users) (Rule 291)

$$TUSAC = TSSC - TNUSAC$$

Where:

- TUSAC = the Total user-specific swing service cost across all users for the gate point for the gas day;
- TSSC = the total swing service cost across all users for the gate point for the gas day calculated under rule 289; and
- TNUSAC = the total non-user-specific swing service cost across all users for the gate point for the gas day calculated under rule 290.

ALLOCATION, RECONCILIATION AND SWING (continued)

Allocating Swing Service in Bid Stack (Part 5.12) (continued):

- For each user, calculate its user-specific swing service cost (Rule 292)

$$USAC = TUSAC \times \frac{AUSA}{TAUSA}$$

Where:

- USAC = the user's user-specific swing service cost for the gate point for the gas day;
- TUSAC = the total user-specific swing service cost across all users for the gate point for the gas day calculated under rule 291;
- AUSA = the user's adjusted user-specific amount of swing service for the gate point for the gas day calculated under rule 274; and
- TAUSA = the total of all users' adjusted user-specific amounts of swing service for the gate point for the gas day calculated under rule 275.



ALLOCATION, RECONCILIATION AND SWING (continued)

Allocating Swing Service in Bid Stack (Part 5.12) (continued):

- For each user, calculate its non-user-specific swing service cost (Rule 293)

$$NUSAC = TNUSAC \times \frac{ANUSA}{TANUSA}$$

Where:

- NUSAC = the user's non-user-specific swing service cost for the gate point for the gas day;
- TNUSAC = the total non-user-specific swing service cost across all users for the gate point for the gas day calculated under rule 290;
- ANUSA = the user's adjusted non-user-specific amount of swing service for the gate point for the gas day calculated under rule 272;
- TANUSA = the total of all users' adjusted non-user-specific amounts of swing service for the gate point for the gas day calculated under rule 273.



ALLOCATION, RECONCILIATION AND SWING (continued)

Allocating Swing Service in Bid Stack (Part 5.12) (continued):

- For each user, calculate its total swing service cost (Rule 294)

$$US = USAC + NUSAC$$

Where:

- UC = the user's total swing service cost for the gate point for the gas day;
- USAC = the user's user-specific swing service cost for the gate point for the gas day calculated under rule 292; and
- NUSAC = the user's non-user-specific swing service cost for the gate point for the gas day calculated under rule 293.



ALLOCATION, RECONCILIATION AND SWING (continued)

Allocating Swing Service in Bid Stack (Part 5.12).

- Swing service contract note (Rule 296)
 - REMCo issues a Contract note to both the SSP and the User for settlement of the service provided.



ALLOCATION, RECONCILIATION AND SWING (continued)

Allocating Swing Service in Bid Stack (Part 5.12).

- User must pay swing service provider (Rule 296A)
 - Any contract note issued by REMCo is a valid contract that is enforceable under the Rules.
- Timing of repayment of swing service repayment amounts (Rule 298)
 - The SSP repays the gas on D+2.
- Calculation of swing service repayment quantities (Rule 299)
 - The SRQ is calculated and provided to Users and SSP's 5 hours after the end of the gas day.



ALLOCATION, RECONCILIATION AND SWING (continued)

Allocating Swing Service in Bid Stack (Part 5.12).

- Notification of swing service data (Rule 300) the following data is provided by REMCo:
 - Users Total (pre Procurement) SS (USS)
 - User's user-specific amount of SS (USA)
 - User's non-specific amount of SS (NUSA)
 - User's adjusted non-user-specific amount of SS (ANUSA)
 - User's adjusted user-specific amount of SS (AUSA)
 - Absolute value of Sum of all UETW in subnet
 - Sum of all User's deemed withdrawals (\sum UDW)
 - Total of all Users user-specific SS
 - Total of all User's non-user-specific amount of SS
 - Total of all User's adjusted user-specific SS
 - Details of off market applied requests to SSP's & Users



ALLOCATION, RECONCILIATION AND SWING (continued)

This concludes Part 5.12 (Allocating Swing Service in Bid Stack).

- To summarise Allocating Swing Service in Bid Stack
 - REMCo notionally allocates each user's UETW to one or other of the pipelines by applying the UAI.
 - This is the UDW, which is the amount that a user's shippers need to inject from that pipeline to meet customer withdrawals.
 - Swing service occurs when one pipeline supplies gas that, according to all user's UDWs, should have been supplied by the other pipeline.

ALLOCATION, RECONCILIATION AND SWING (continued)

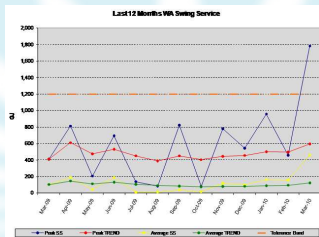
This concludes Part 5.12 (Allocating Swing Service in Bid Stack).

- To summarise Allocating Swing Service in Bid Stack (continued)
 - Swing service involves a retrospective contract for the loan or park of gas on day 0 and repayment on day 2.
 - Swing service contracts include non-user specific (blame-free) and user specific amounts.
 - REMCo operates a 'bid stack' to set the price for on-market swing service.

OTHER RELEVANT INFORMATION

End of month (EOM) Swing Service Reports

BLAST Report - March 2010		
	Peak SS (GJ)	Average SS (GJ)
March 2009	410	104
April 2009	813	190
May 2009	207	45
June 2009	695	187
July 2009	138	13
August 2009	84	13
September 2009	624	40
October 2009	80	16
November 2009	779	120
December 2009	545	100
January 2010	858	164
February 2010	459	159
March 2010	1,763	461
Average from market start		204



QUESTIONS

Any questions?

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