



Maui Development Limited

# ICD Process Presentation

2 October 2009

# Scope

- We believe that many of the required transmission balancing objectives can be met by a combination of:
  - BGX enhancements.
  - Changes to MDL Operating Procedures.
  - Changes to the MPOC.
- This presentation concentrates on what has been, and what can be achieved using these means.
- While this presentation is pitched at a high level, the great majority of the work discussed here has been developed in detail and is available to be discussed in the form of specific MPOC changes.

# Exclusions

- This presentation does not deal with:
  - Implementation of a “unified” balancing agent.
  - Direct BA to Causer relationship.
  - Extended nominations.
  - D+1.
  - Overall system design.
- These are up for consideration later.

# Scope

1. Back to Back Balancing
  1. Practicality
  2. Incentives Pool
  3. Tolerances
  4. TSO Imbalances
  5. Mismatch
  6. ROI Adjustments
2. BGX changes
  1. Transparency
  2. Marginal Pricing
  3. Timing
  4. BGX Upgrade
3. Revised SOPs
4. Balancing Agent Duties
5. Dispute Resolution
6. Transition

# Back to Back Balancing 1

- Implementation through MPOC changes is practicable.
- OATIS changes will be required, but the current view is that these need not be extensive.
- Both daily and hourly models considered, but an hourly model considered impracticable for the present.
- A daily model requires the retention of peaking charges.
- Simulation model runs show that close to 100% recovery of balancing charges is possible, given a substantial reduction/elimination of tolerances.
- The match between balancing gas costs and balancing charges is much better than obtainable at present through cash outs and Incentives Pool charges.

# Back to Back Balancing: Incentives Pool

- With back to back balancing the Incentives Pool mechanism is not needed for the collection of imbalance charges.
- Current thinking is to remove the Incentives Pool from the MPOC, and:
  - Retain peaking charges, which would be set at a specific dollar amount per GJ.
  - Seek Industry views on the inclusion of provisions for Welded Party to Welded Party claims formerly handled through the Pool.
    - The Critical Contingency Regulations appear to reduce the need for this mechanism.
    - If it is retained, it should be developed in a way that does not leave the Balancing Agent as judge and jury for any claim made.
- ILONs are not needed.

## Back to Back Balancing: Imbalance Tolerances

- Under back to back balancing the cost of all balancing gas is allocated. If not allocated to welded points, it is socialised and recovered through the tariff.
- The primary effect of a moderate allocation of tolerances is to shift balancing costs from one welded point with imbalance to another.
- As tolerance levels increase, the level of socialisation of balancing costs also increases. This eventually manifests itself as increased tariffs.
- Tolerances act against the “cost to causer” principle.
- Our current thinking is to retain the provision for imbalance tolerances in the MPOC, but set them to zero.

# Back to Back Balancing: TSO Imbalances

- The concept of TSO caused imbalance is easy to understand. The practical problems in managing it are more difficult.
- In the case of the Maui Pipeline, it may arise from three main causes:
  - UFG – otherwise known as meter error.
  - “Socialised” balancing gas that has not been removed from the pipeline.
  - Changes in linepack thresholds due to compressor operation or changes in pipeline flow.
- Actions required:
  - Buy or sell UFG at reasonable intervals. (See SOP discussion).
  - Buy or sell any socialised gas. (Zero tolerances eliminate this problem).
  - Consider setting fixed target line-packs – that is don't use a target line pack that changes with the flow rate.

# Back to Back Balancing: UFG

How hard can it be to deal with UFG?

**Maui Pipeline: UFG August 2009**



Maui Pipeline UFG (GJ)	
Sep-08	-31,421
Oct-08	-32,178
Nov-08	-11,022
Dec-08	-38,258
Jan-09	-31,221
Feb-09	-46,711
Mar-09	-36,994
Apr-09	-53,975
May-09	-59,901
Jun-09	-37,057
Jul-09	-67,107
Aug-09	-41,537

# Back to Back Balancing: Other Topics

- Mismatch
  - Mismatch prices will be retained and set to the most recent prices for balancing gas.
  - Mismatch is now very rare. If it occurs it will be cashed out on the day at the mismatch price.
- Metering Adjustments
  - We propose notifying any ROI changes resulting from metering adjustments or similar causes in advance.
  - However we do not intend to alter balancing cash outs retrospectively.

# BGX: Transparency

- MDL has accepted the principle of an open transparent market. Prices and quantities of all balancing transactions are available on the BGX.
- There are still questions about access to the BGX from points outside the Maui Pipeline. These will be better dealt with as part of the presentations next week.
- We are proposing changes to the content of Section 4 of the MPOC that will increase the amount of operational information that will be generally available to all pipeline users. The intention is to provide better information through the BGX.
- We think the additional information proposed will make the operation of back to back balancing more efficient.

# Marginal Pricing and Thresholds

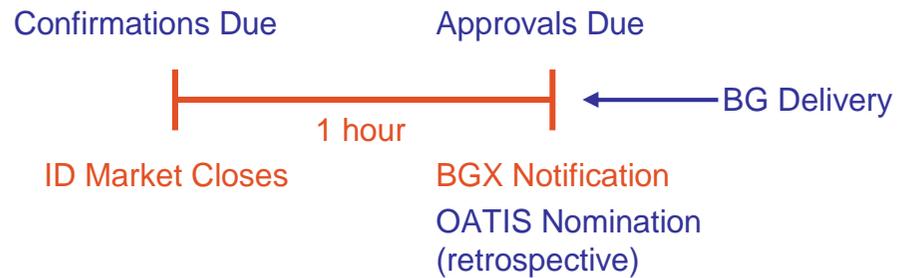
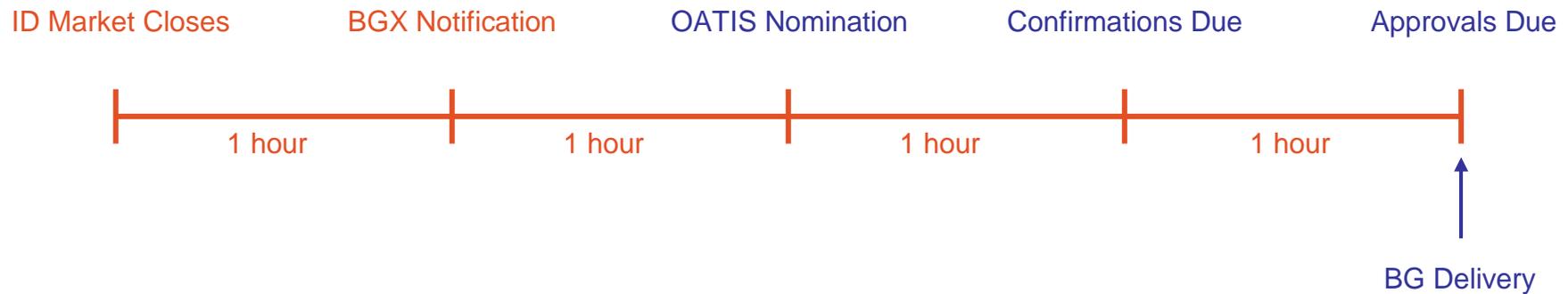
- MDL has adopted a weighted average method of calculating mismatch prices from balancing costs.
- This reflects the fact that the BGX, in effect, conducts separate markets for each ID cycle.
- Marginal Pricing could be adopted, either for each ID cycle or each complete day.
- Thresholds should depend on the value attributed to avoiding a contingency event or a critical contingency event.
- This may mean that the threshold price for Call gas should be set at a reasonably high level.

## BGX: Timing

- The conditions under which balancing gas is supplied to the Maui Pipeline have changed substantially in the last year.
- We are proposing amendments to the MPOC that will allow the quantity of balancing gas required at a particular ID cycle to be set once the nominations for that cycle have been confirmed.
- This will allow:
  - More accurate determination of the quantity of balancing gas required.
  - A reduction in lead times for balancing gas supply.

# BGX – Timing

## Closing the 4 hour gap:



# BGX – Upgrade Overview

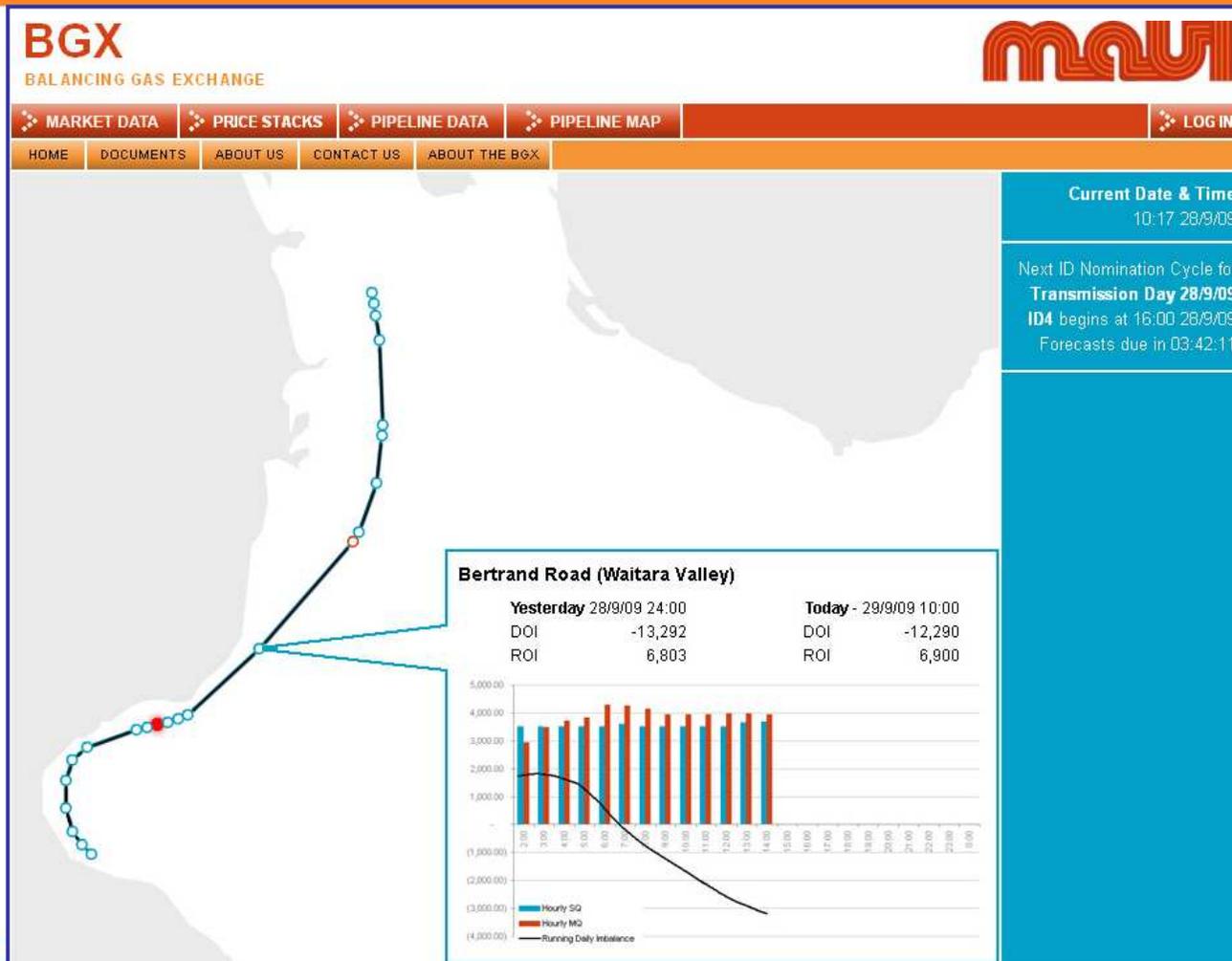
The BGX Upgrade Project will see improvements to:

- **Market efficiency**  
Making the BGX Notification process more functional
- **Information**  
Improving Pipeline, Market and Financial information availability
- **User interaction**  
Broadening Balancing Market Participants functionality

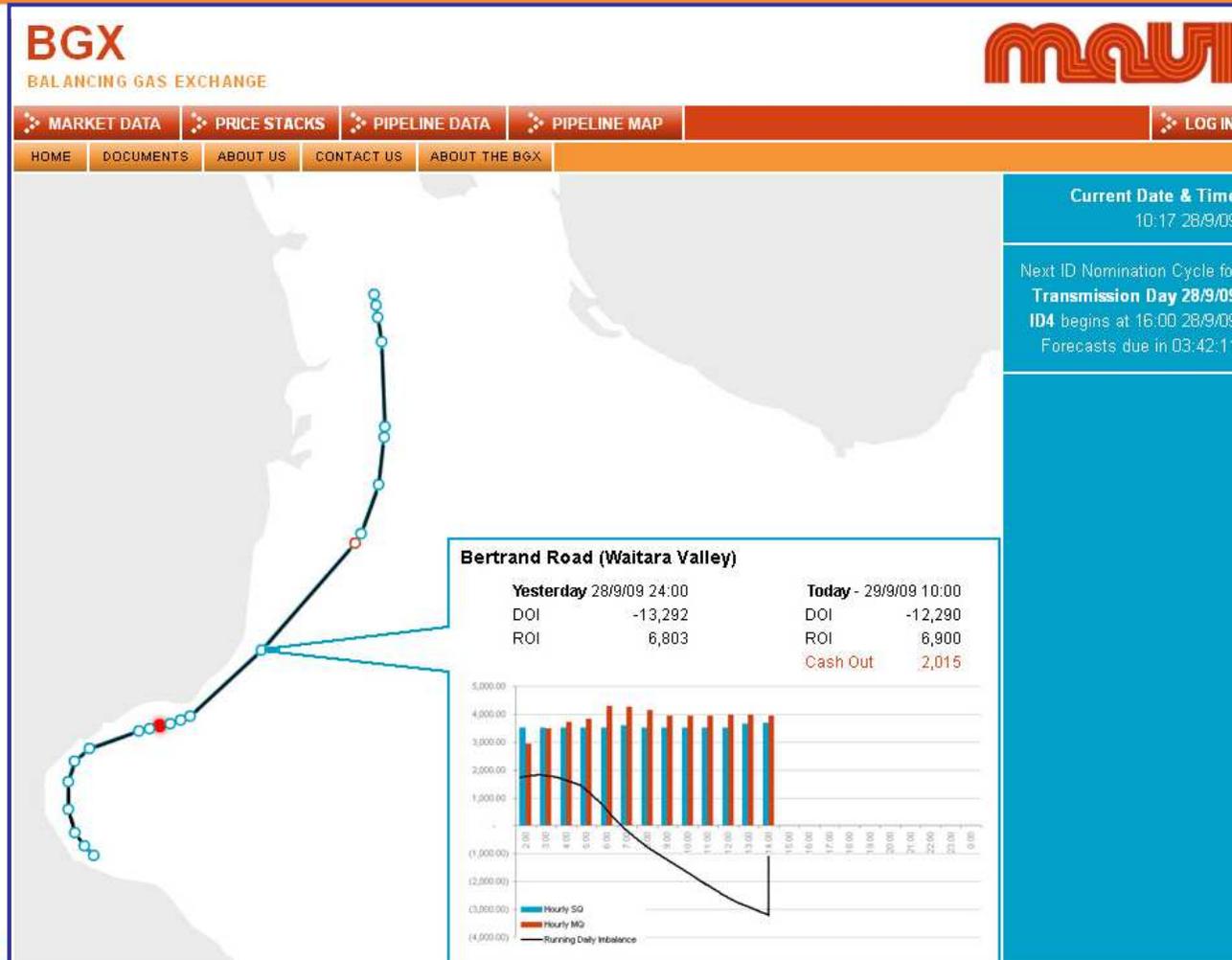
# BGX - Information

- Real-time Operational Imbalance data
- Real-time Cash Outs
- Real-time Line Pack data
- Real-time Pressure data
- Back-to-Back Cash Out statements
- BGX Financial Disclosure

# BGX - Real-Time Operational Imbalance Information



# BGX - Real-Time Cash Out ROI Updates



# BGX - Pipeline Information

## BGX

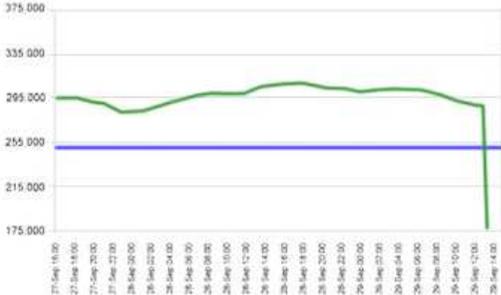
BALANCING GAS EXCHANGE



MARKET DATA
PRICE STACKS
PIPELINE DATA
PIPELINE MAP
LOG IN

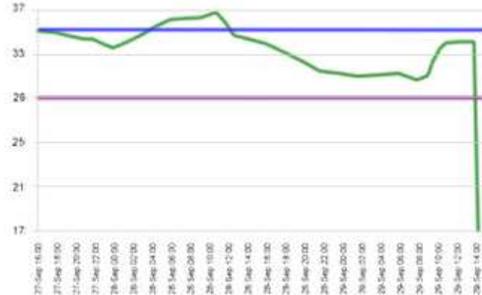
HOME
DOCUMENTS
ABOUT US
CONTACT US
ABOUT THE BGX

### Hourly Linepack - Maui Pipeline



Date/Time NZST

### Hourly Pressure - Bertrand Road



Date/Time NZST

**Current Date & Time**  
10:17 28/9/09

Next ID Nomination Cycle for  
**Transmission Day 28/9/09**  
ID4 begins at 16:00 28/9/09  
Forecasts due in 03:42:11

### Hourly Linepack - Maui Pipeline

Triggered Call	
Date	Linepack (GJ)
29 Sep 15:00	
29 Sep 14:00	285,813
29 Sep 13:00	287,479
29 Sep 12:00	289,611
29 Sep 11:00	290,614
29 Sep 10:00	293,607

### Hourly Pressure - Bertrand Road

Triggered Call	
Date	Pressure(Bar)
29 Sep 15:00	
29 Sep 14:00	47.0
29 Sep 13:00	47.1
29 Sep 12:00	47.1
29 Sep 11:00	47.0
29 Sep 10:00	46.2

Download Data File CSV

# BGX - Back-to-Back Cash Out Statements

**BGX**  
BALANCING GAS EXCHANGE



[MARKET DATA](#)
[PRICE STACKS](#)
[PIPELINE DATA](#)
[PIPELINE MAP](#)
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## Back-to-Back Cash Out Statement

Transmission Day 10/05/2010		
Call Gas Transactions	15,000	\$142,500.00
Put Gas Transactions		-
<b>Welded Point</b>	<b>MB</b>	<b>Cash Out Quantity</b>
Frankley Road	9,546	4,982
Bertrand Road	6,587	3,438
Ngatimaru Road (Delivery)	6,321	3,299
Turangi Mixing Station	4,857	2,535
Oaonui	654	341
Pirongia	621	324
Tikorangi	153	80
<b>Total</b>	<b>28,739</b>	<b>15,000</b>

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[Download Data File CSV](#)

Last Updated:  
10:00:00 28/9/2009 Mon

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Last Updated:  
10:00:00 28/9/2009 Mon

# BGX - Financial Disclosure

- GJ
- \$/GJ
- Total \$
- Product
- Cycle
- Monthly Summary

BGX Financial Disclosure - September '09						
	Date	GJ	\$ per GJ	Total	Product	Cycle
3	9/1/2009	(2,500)	\$2.00	\$5,000.00	Put	ID1
4	9/4/2009	5,000	\$0.00	\$0.00	Call	ID3
5	9/4/2009	5,000	\$11.29	\$56,450.00	Call	ID3
6	9/6/2009	5,000	\$0.00	\$0.00	Call	ID1
7	9/7/2009	5,000	\$0.00	\$0.00	Call	ID1
8	9/7/2009	4,000	\$14.50	\$58,000.00	Call	ID3
9	9/11/2009	(5,000)	\$1.50	\$7,500.00	Put	ID3
10	9/11/2009	(5,000)	\$1.25	\$6,250.00	Put	ID4
11	9/12/2009	(2,500)	\$1.51	\$3,775.00	Put	ID3
12	9/12/2009	(2,500)	\$1.50	\$3,750.00	Put	ID3
13	9/12/2009	(2,500)	\$1.50	\$3,750.00	Put	ID4
14	9/12/2009	(2,500)	\$1.25	\$3,125.00	Put	ID4
15	9/13/2009	(2,500)	\$1.51	\$3,775.00	Put	ID3
16	9/13/2009	(1,000)	\$1.50	\$1,500.00	Put	ID3
17	9/13/2009	(1,500)	\$1.25	\$1,875.00	Put	ID3
18	9/17/2009	(5,000)	\$1.25	\$6,250.00	Put	ID1
19	9/19/2009	(5,000)	\$1.25	\$6,250.00	Put	ID3
20	9/20/2009	5,000	\$0.00	\$0.00	Call	ID4
21	9/21/2009	5,000	\$0.00	\$0.00	Call	ID1
22	9/21/2009	5,000	\$11.94	\$59,700.00	Call	ID3
23	9/21/2009	3,000	\$12.39	\$37,170.00	Call	ID3
24	9/21/2009	3,000	\$10.93	\$32,790.00	Call	ID4
25	9/21/2009	1,600	\$12.25	\$19,600.00	Call	ID4
26	9/23/2009	(2,500)	\$1.20	\$3,000.00	Put	ID1
27	9/23/2009	(2,500)	\$1.00	\$2,500.00	Put	ID1
28	9/23/2009	(2,500)	\$0.75	\$1,875.00	Put	ID2
29	9/23/2009	(1,000)	\$0.51	\$510.00	Put	ID3
30	9/23/2009	(1,500)	\$0.25	\$375.00	Put	ID3
31	9/23/2009	(2,500)	\$0.25	\$625.00	Put	ID4
32	9/24/2009	(5,000)	\$0.25	\$1,250.00	Put	ID1

Monthly Summary		
Month:	Sep-09	
Call Balancing Gas		
	GJ	Cost
<b>Total</b>	46,600	\$263,710.00
Nominal value of \$0 Call Gas*		
		\$150,000.00
*Based on estimated value of \$6.00		
Put Balancing Gas		
	GJ	Income
<b>Total</b>	(68,000)	\$66,835.00

# BGX - User Interaction

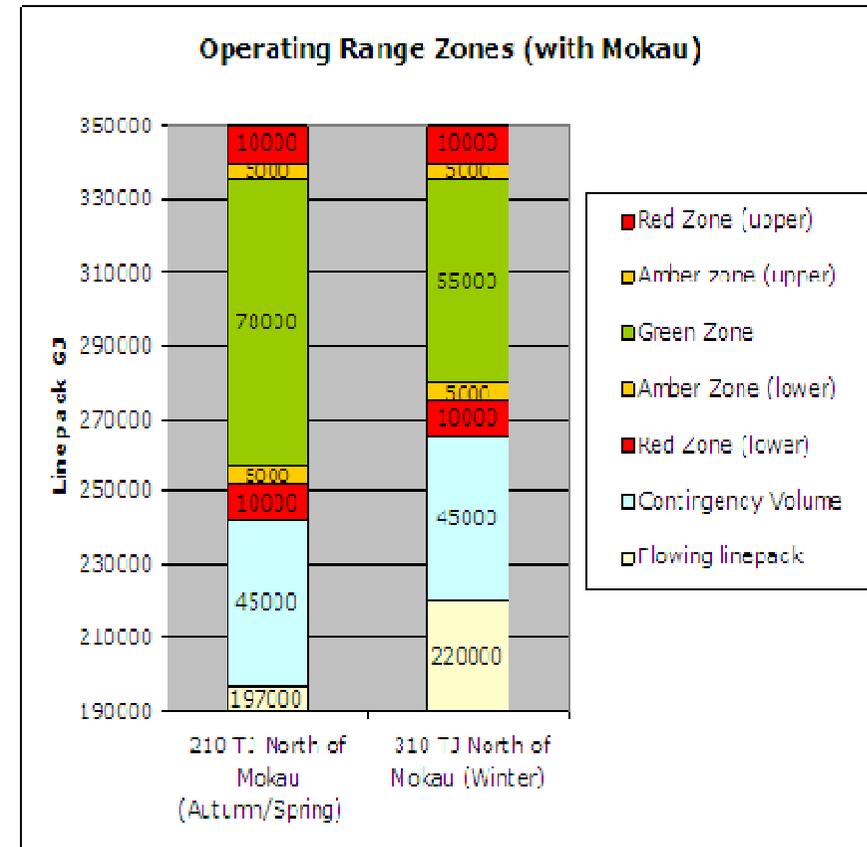
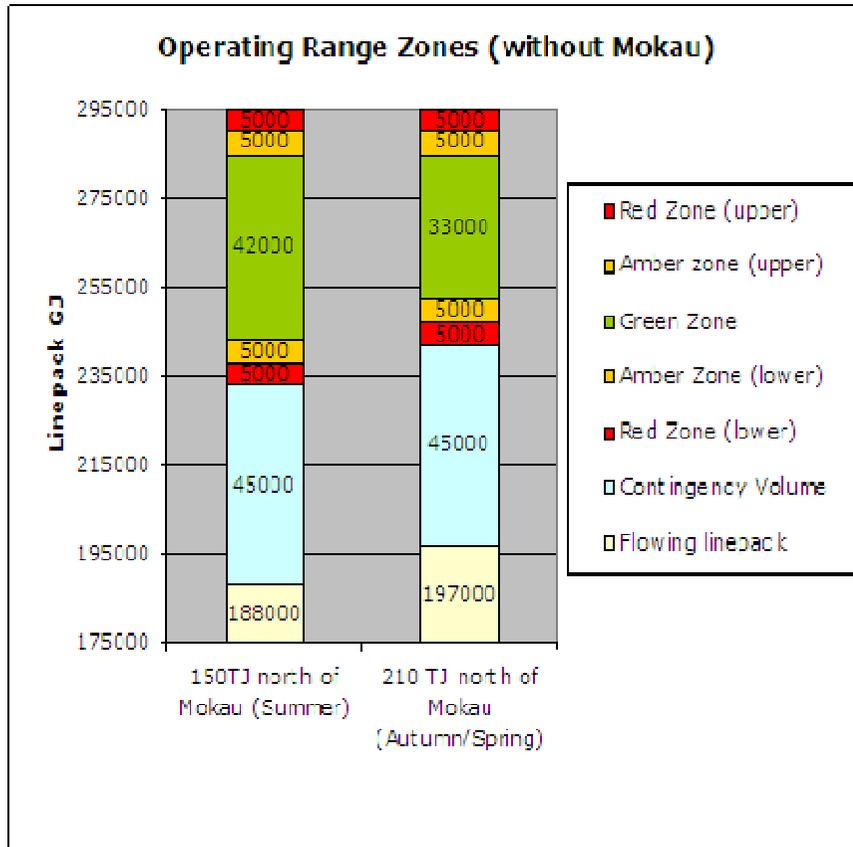
- Automated Financial Disclosure
- Automated Market Data
- Simplified Countdown Timer
- User-Specific Transaction Search

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# Revised SOPs

- Review of Contingency Volume.
- Maximise pipeline flexibility available to users.
- Maintain pipeline capacity.
- Acceptable incidence of contingency events.
- Greater flexibility to reduce balancing costs.
- Provide method for handling UFG and keep pipeline from accumulating or losing gas.

# Revised SOPs: Operating Ranges



# Revised SOPs: Active line pack management

- Supports approved nominations by maintaining pipeline flexibility when line pack is gained or lost from the pipeline. The method used is:
  - Adjust line pack for amount of accumulated ROI and compare with target line pack.
  - If not within 5 TJ then adjust by purchase or sale, most likely using ID3 cycle.
  - Adjustment may be delayed if it would push line pack into the orange zone.
  - If Mokau running, target might be set higher to help avoid use of Call gas.

# Balancing Agent's Duties

- We are proposing that the MPOC be amended to include a section on the Balancing Agents duties.
- Provisions would include:
  - Buying and selling on least cost, arms length basis.
  - Publication of price stacks, transactions, timeframes and terms and conditions.
  - Operation according to the SOPs, which are published.
  - Operation of the BGX and provision of information on it.
  - Monthly expenditure and income statements.
- Detail of these provisions can be made available.

# Dispute Resolution

- A process for the quick and efficient resolution of disputes is needed.
- We propose amending the MPOC to provide for:
  - Provisions to negotiate disputes directly between the parties for a period of up to 15 business days.
  - After the 15 days, either party may refer the dispute to the Rulings Panel constituted by the Gas Governance Compliance Regulations.
- We believe implementation of this proposal will require amendment of the regulations to allow for disputes to be handled by the panel.

# Transition Provisions

- Implementation of the changes proposed here will require a carefully staged implementation process.
- We therefore propose amending the MPOC to allow change requests to incorporate:
  - A timetable for the changes to take effect.
  - Transitional provisions to allow them to take effect in an orderly way; and
  - Conditions that must be satisfied for them to take effect.
- A change request incorporating these provisions may precede the other MPOC changes set out here.