

Balancing – proposed improvements



Background (1) – TP Welded Points

- Welded Points are Maui pipeline connection points where gas can enter and/or exit
- TP Welded Points are Welded Points between the Maui Pipeline and the ex-Vector transmission pipelines
- Under the VTC, each TP Welded Point is part of a Balancing & Peaking Pool (BPP):

TP Welded Point	BPP
Rotowaro	North
Pokuru	Bay of Plenty (BOP)
Pirongia	Te Awamutu North (TAN)
Frankley Road	South-Kapuni-Frankley Road (SKRF)

Background (2) – Imbalance

- Nominations are booked quantities of gas between Welded Points
- If the actual flow of gas on a day to/from a Welded Point is different to the nominations for that Welded Point, then imbalance is accumulated. This is called Running Operational Imbalance (ROI)
- Each Shipper on the ex-Vector pipelines is allocated a share of the ROI at a TP Welded Point based on:
 - Shipper nominations to/from the TP Welded Point
 - Trades at the TP Welded Point
 - Receipts, trades and deliveries downstream of the TP Welded Point.
- A Shipper's share of ROI is called Running Mismatch (RM)

Background (3) – Cash outs

- Cash outs are an incentive charge/credit against Welded Point imbalance to encourage accurate nominations
- When the ROI for a Welded Point is greater than a defined limit, a cash out is charged/credited for the ROI greater than the limit
- The quantity charged/credited in the cash out for a day is removed from the ROI for the next day
- Cash outs at TP Welded Points are allocated among First Gas and Shippers
- The quantity from a cash out for a day that is allocated to a Shipper is removed from that Shipper's RM for the next day

Background (4) – Cash outs & TP Welded Points

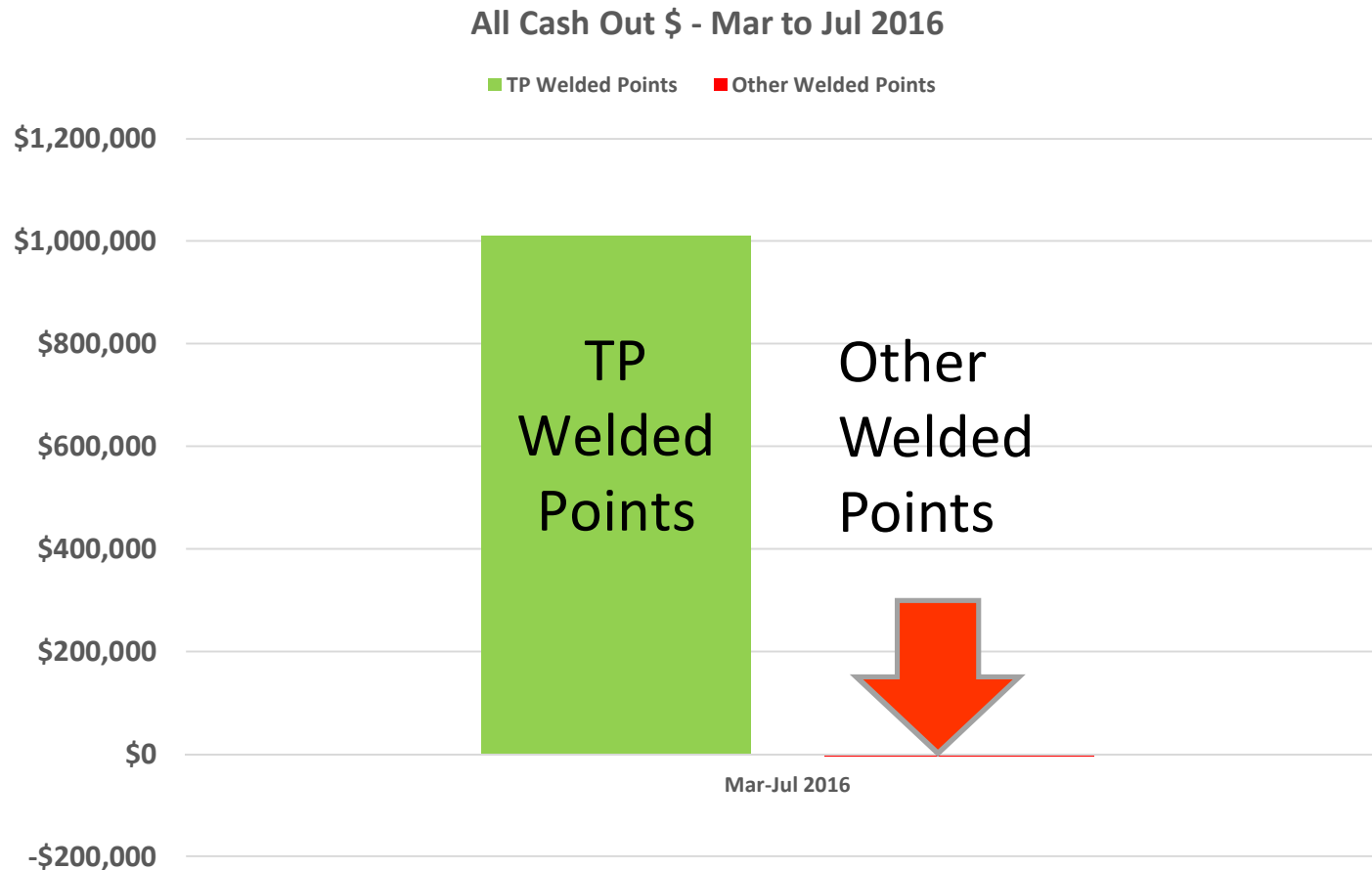
- Cash outs for TP Welded Points are necessary under current SOPs
- They transfer the ownership of imbalance to the Maui pipeline
- This allows the ex-Vector pipelines to continue flowing to demand
- Ending or restricting cash outs at TP Welded Points would require a redesign of the operating procedures for the Maui and ex-Vector pipelines

Background (5) – Recent Changes

- In October 2015, the Market Based Balancing (MBB) regime commenced. Shortened the time for cashing out imbalances from 3 days to the end of each day
- In December 2015, the D+1 Pilot commenced.
 - The D+1 Pilot is enabled by the D+1 Pilot Agreement.
 - Prior to the D+1 Pilot, Shippers were informed of their RM for a day on a month in arrears basis
 - The D+1 Pilot provides Shippers with their RM for a day by 4:30pm on the next business day

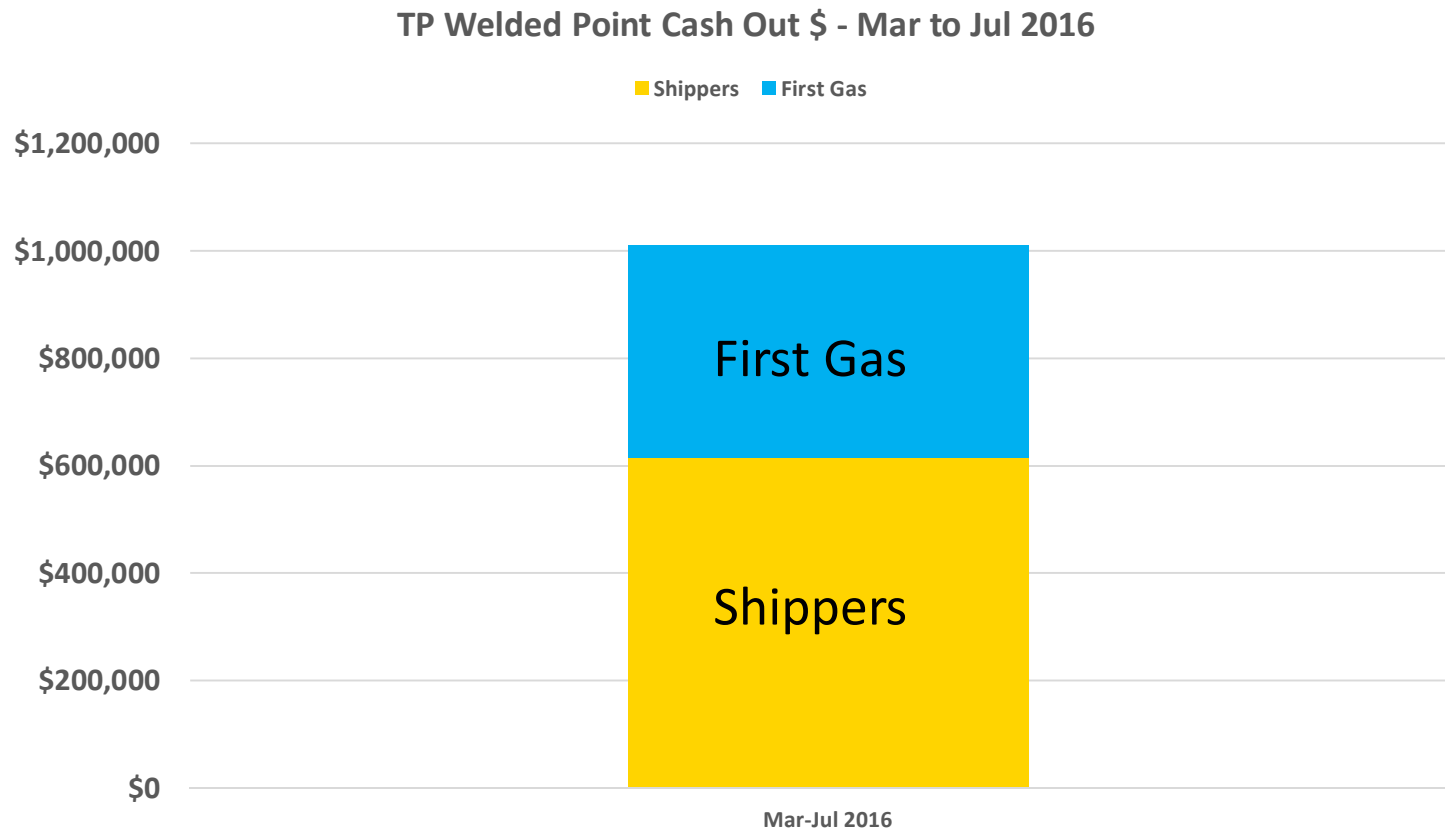
Background (6) – Welded Point Cash Outs

The real cash out action is at the TP Welded Points:



Background (7) – TP Welded Point Cash Outs

Based on cash outs for March to July 2016, Shippers are allocated 61% of the cash outs at TP Welded Points:



The Problem (1) – What is it?

Cash outs allocated to Shippers can exceed their RM (sometimes for quantities far larger than RM)

- If Shippers can be charged/credited for more than their RM then what should they manage to?

The Problem (2) - Why is this a problem?

- Shippers manage their RM on a day to day basis
- The goal being to reduce RM to zero or as close to zero as possible
- This is to minimize or avoid the risk of being allocated a share of any cash out
- Shippers find out their share of cash outs and the resulting changes to their RMs by 4:30pm each business day
- Because a Shipper's share of a cash out could be anything from 0% to 100% of the cash out, the margin of error for managing to an estimate of a share of a cash out can be very large
- Means that Shippers are waiting for the data at 4:30pm and only have one nomination cycle to adjust to any major changes to RM

The Problem (3) – How does it happen?

- ROI at TP Welded Points is made up of:
 - Shippers RMs
 - VRI (First Gas' share of the ROI)
 - Line pack changes
- Cash outs at TP Welded Points can be due to any one or a combination of Shipper RM, VRI and Line Pack changes
- Cash outs are allocated against Shippers RMs and VRI
- Therefore, if, on a day:
 - Cash out is due to line pack change as well as Shippers RM and/or VRI; and
 - Cash out > eligible Shippers RMs + VRI; then
 - Cash out allocation to a Shipper can be greater than RM.

Outline of Proposed Solution

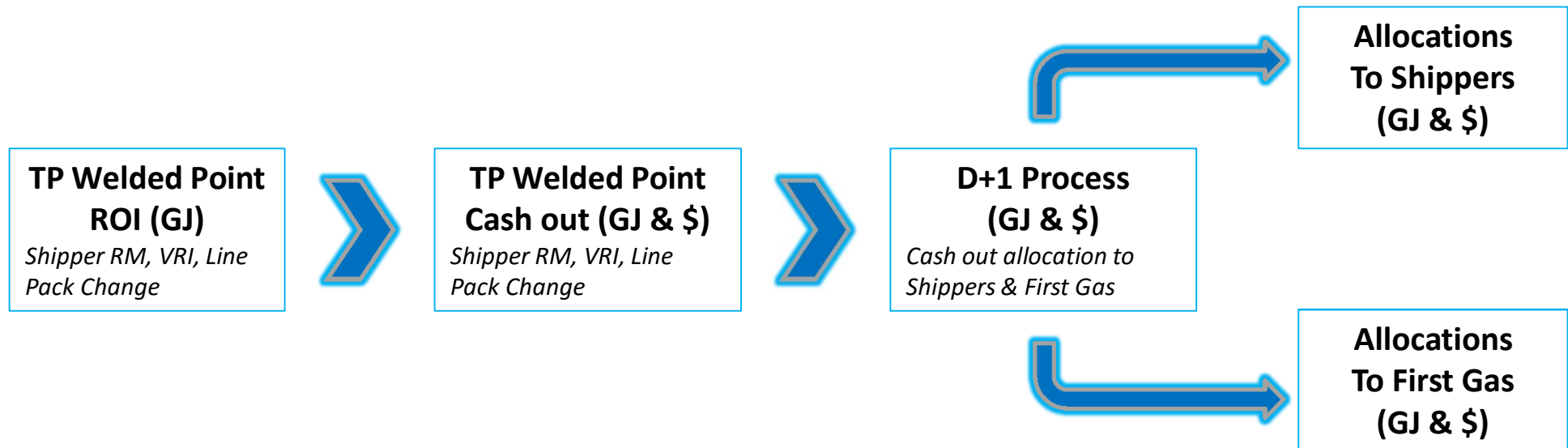


Outline of Proposed Solution (1) – D+1 Pilot Change

The D+1 Pilot Agreement will be changed so that:

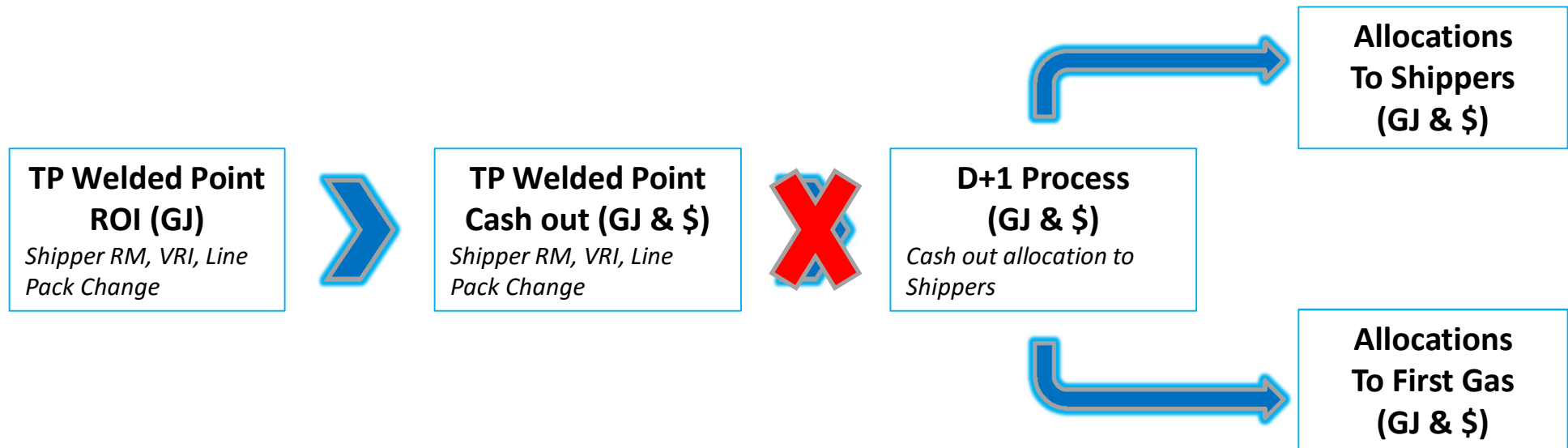
- Cash outs on ex-Vector pipelines will be determined under the D+1 Pilot (D+1 Cash Out) and will not be related to the MPOC cash out at the TP Welded Point
- D+1 Cash Outs will be determined as though the aggregate of Shippers RM for a BPP is the ROI for the relevant TP Welded Point
 - i.e. If Shippers RM > ROI Limit then a D+1 Cash Out is generated
- Shippers will be allocated a share of a D+1 Cash Out depending on the size of their RM, if it is in the same direction as that D+1 Cash Out
- The price that applies to the D+1 Cash Out will be calculated as per an MPOC cash out
- Portions of D+1 Cash Outs allocated to Shippers may be either lower or higher than would occur under the current system for TP Welded Point cash outs, but they will be determined only by Shipper RM

Outline of Proposed Solution (2) – Current Process



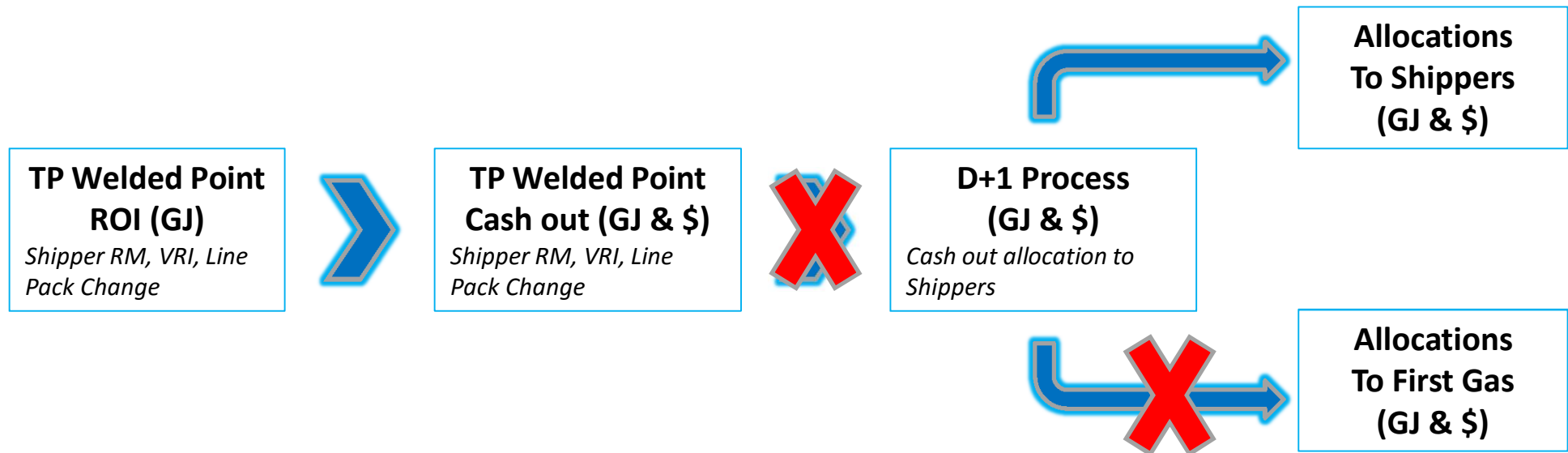
Outline of Proposed Solution (3) – Process Change

Break the link between TP Welded Point cash outs and Shippers



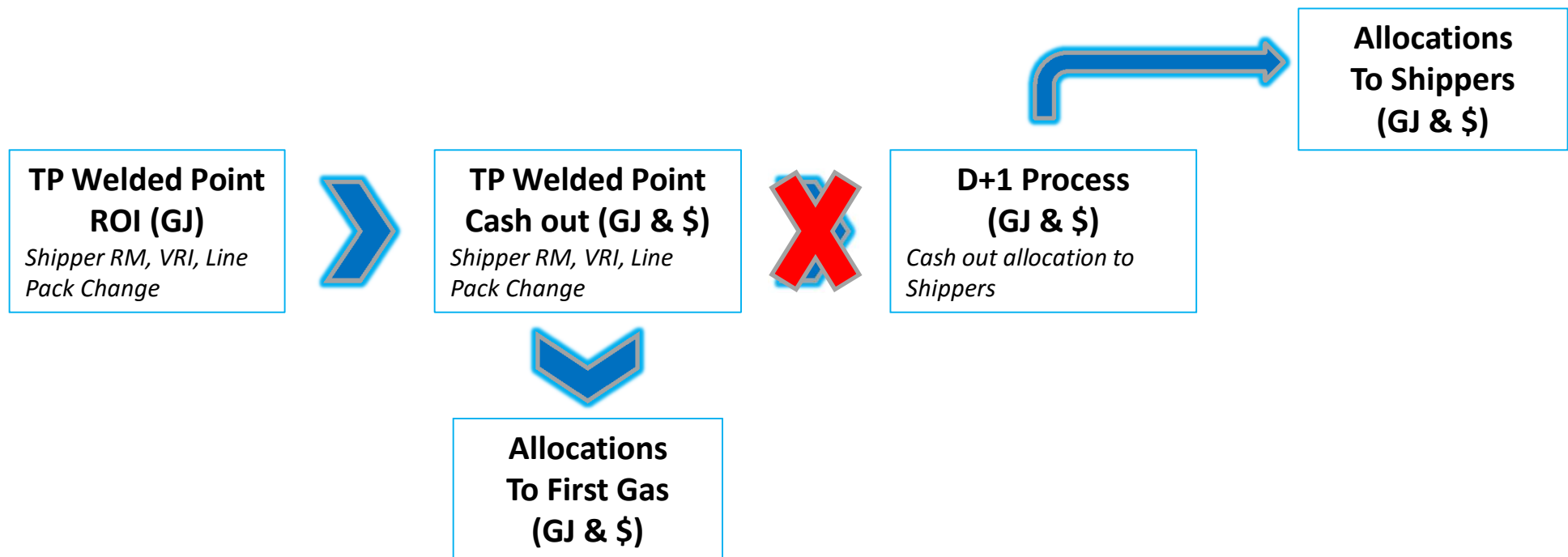
Outline of Proposed Solution (4) – Process Change

Remove any influence First Gas has on allocations to Shippers



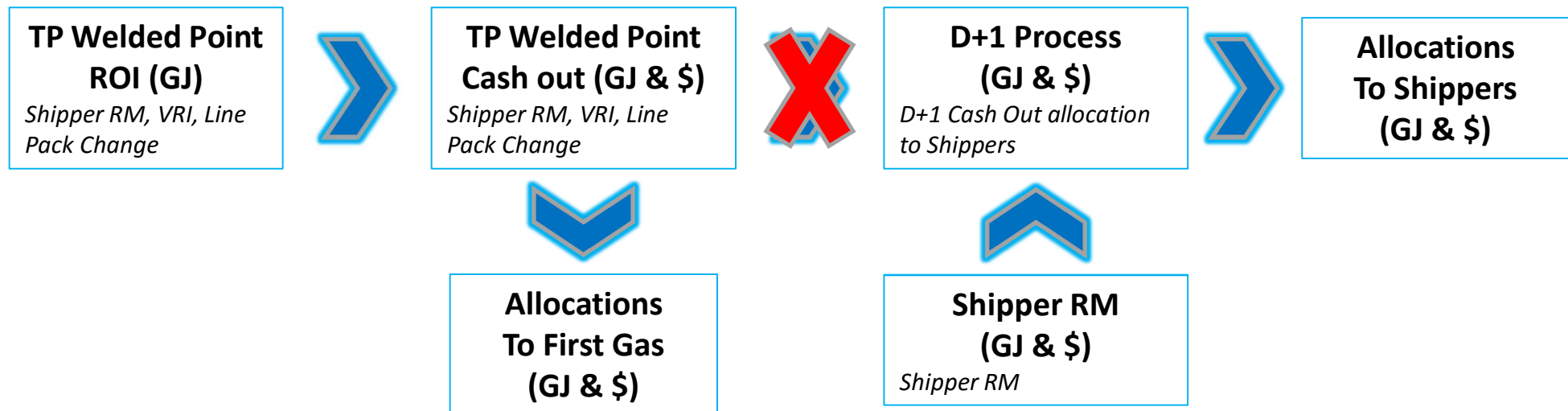
Outline of Proposed Solution (5) – Process Change

TP Welded Point cash outs become internal transactions for First Gas



Outline of Proposed Solution (6) – Changed Process

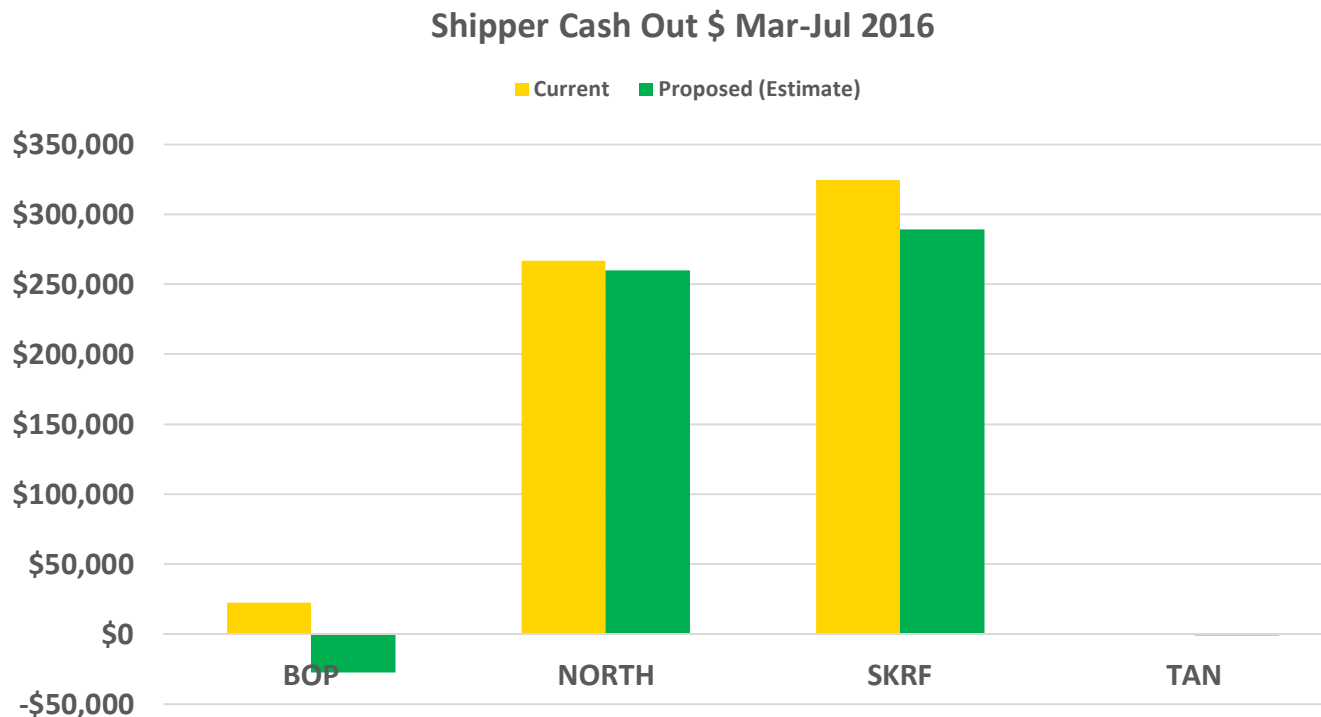
Shippers are allocated for D+1 Cash Outs based on RM



Estimated Effect of Change (1) - Shippers

Effect on Shippers.

- Estimates of D+1 Cash Outs charged to Shippers, using data for March to July 2016, has shown a negligible change to the cash out charges currently being allocated:



Estimated Effect of Change (2) – First Gas

- First Gas' share of cash out allocations for TP Welded Points is money that First Gas owes itself
- Cash outs are a recoverable cost
- Net effect of the changes will be to reduce the size of the recoverable cost claims associated with both pipelines as they will be off-set against one another
- Net effect to First Gas income will be negligible

Advantages of Proposed Change

Advantages		Disadvantages	
Shippers can only be allocated a portion of a cash out up to RM	✓	D+1 Pilot Agreement change required	✗
Shippers gain full use of ROI Limits	✓	D+1 Pilot system change required	✗
No MPOC changes required	✓		
No VTC changes required	✓		
Shippers RM from day to day becomes easier to predict	✓		
Incentive for Shippers to balance remains	✓		

- The cash out price Default Rule will be reviewed
- Cash outs at TP Welded Points are a variable of the Default Rule
- Option of D+1 Cash Outs allocated to Shippers taking the place of TP Welded Point cash outs for the Default Rule is being looked at

Summary - VTC and D+1 Changes

1. No changes to the VTC are required
2. The D+1 Pilot Agreement will be changed
 - A revised draft is currently in preparation and will be distributed to Shippers
 - Implementation of the revised D+1 Pilot Agreement requires the approval of the Shippers who signed the original agreement
3. Changes to the D+1 software will be necessary
 - Any changes to D+1 variables or calculations means software changes
4. Implementation will need to occur at the start of a calendar month
 - This aligns the changes with distribution allocation wash-ups

Summary – MPOC Changes

1. No changes to the MPOC are required
2. Default Rule is being reviewed
3. Any changes to the Default Rule will be made available to stakeholders for consultation

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