D+1 Options Paper

December 2022

Gas Industry Co.

Executive Summary

D+1 Pilot

The D+1 pilot has been in operation for almost seven years. It provides allocations of downstream gas quantities to retailers the day after gas has flowed, allowing Firstgas to perform daily Balancing & Peaking Pool (BPP) calculations, allocate daily cash-outs, and ultimately provide shippers with information to manage their running mismatch positions.

The pilot was not intended as a long-term solution, but the review and evolution of D+1 was delayed by the industry's collective efforts on GTAC and TACOS. With the decision by Firstgas to abandon GTAC, attention could return to D+1.

After several years' experience, stakeholder views of the pilot were that, while there was room for improvement in terms of accuracy and reliability, D+1 had become an industry critical system and, as such, should be made permanent. Gas Industry Co therefore began working on a Statement of Proposal to amend the Gas (Downstream Reconciliation) Rules 2008 to codify aspects of D+1.

Identifying Options

In early 2022, we paused the Statement of Proposal in order to undertake additional work identifying non-regulatory alternatives to the proposed rule changes. This is a Gas Act requirement, to ensure that the objective of any regulation [or rule] is unlikely to be satisfactorily achieved by any reasonably practicable means other than the making of the regulation [or rule].

Accordingly, this paper presents regulatory and non-regulatory options for transitioning from the pilot to an enduring set of D+1 arrangements:

Non-regulatory solutions		Regulatory solutions	
Option 1 Alternative daily information	Option 2 Contractual arrangements	Option 3 Core rule changes	Option 4 Broader rule changes
• Keep daily BPP but discontinue GIC D+1 • FG uses a different process to establish daily allocations eg specified shipper algorithm • Less accurate allocation but easier to operate	• Keep D+1 operating under industry agreements without changing Rules • Tweak agreements to meet requirements of a long-term solution • More flexibility than regulation • D+1 allocations could be managed by GIC or Firstgas	• Amend Rules to add basic obligations eg supplying data, performing allocations • No change to operation of D+1 • Compliance regs would provide enforcement of obligations • Costs recovered through market fees	• Make core rule changes per Option 3 • Make further improvements to D+1: • Introduce a threshold for installing telemetry on TOU • Merge initial and interim allocation • Address 7-day BPP

The options above focus on the 'downstream' elements of D+1 – the process currently managed by Gas Industry Co, that provides daily gas allocations to retailers at shared gas gates. We do not anticipate having to use the regulatory process under the Gas Act to address the parts of D+1 that are governed by the Gas Transmission Code.

Future gas market arrangements

D+1 has had continued support from shippers since its inception, because it is an integral part of the operating environment under market-based balancing. But we recognise that the gas market has changed significantly since 2015 and will continue to evolve as New Zealand strives towards a carbon neutral future.

With this in mind, the options paper revisits the drivers for the D+1 pilot and invites stakeholders to consider—before further steps are made to make D+1 permanent—whether there is appetite to explore alternative arrangements that would remove the need for D+1, such as changes to the operation of pipeline balancing.

The impact of such a change would be much wider than the other options presented in this paper, but we think that a change the balancing arrangements is plausible enough (given that balancing arrangements were set to change under GTAC) that we would like to hear industry views.

Submissions

We believe this extra consultation phase, prior to the Statement of Proposal, is necessary because the options identified have not been previously tested with stakeholders. If there is wide support for any of the non-regulatory alternatives then this may take the D+1 workstream (and Statement of Proposal) in a different direction.

Written submissions on this Consultation Paper should be provided to Gas Industry Co via email to consultations@gasindustry.co.nz by **5pm on Tuesday 31 January 2023**. Please note that submissions received after that time may not be able to be fully considered.

Submissions may be amended at any time prior to the closing date. All submissions will be published automatically on Gas Industry Co's website after the closing date. Submitters should discuss any intended provision of confidential information with Gas Industry Co prior to submitting the information.

Gas Industry Co is happy to meet with any stakeholder who wishes to discuss the options paper in more detail.

Contents

1. Introduction

1.1 Background

The D+1 pilot has been in operation for seven years. Gas Industry Co's D+1 system provides allocations of downstream gas quantities to retailers the day after gas has flowed, allowing Firstgas to perform daily Balancing & Peaking Pool (BPP) calculations and ultimately providing shippers with running mismatch positions, including their share of any cash-outs.

Since the D+1 pilot commenced in 2015, it has been Gas Industry Co's intention to review its performance and, if the trial proved successful, make amendments to the Gas (Downstream Reconciliation) Rules 2008 (the Rules) to incorporate daily allocations.

With this goal in mind, we worked with the Daily Allocation Working Group (DAWG) on rule change proposals in 2021 and planned to release a Statement of Proposal to amend the Rules in 2022. While the DAWG had a good degree of consensus on the rule changes, we have since recognised that we need to further explore non-regulatory solutions in order to meet our obligations under the Gas Act.

1.2 Purpose

This paper outlines options for progressing from the D+1 pilot to an enduring set of arrangements. It includes the original proposal of making amendments to the Rules but also considers whether D+1 could be maintained as a non-regulatory solution or whether there are other practicable alternatives to D+1 that meet the industry's needs.

We invite industry feedback on the options outlined in this paper. It is a short consultation to gauge initial reactions to D+1 alternatives that may not have been previously considered.

Feedback will inform our forthcoming Statement of Proposal, which will contain a more detailed assessment of options, as required by the Gas Act, and will invite more substantive submissions from stakeholders.

Recognising that Gas Industry Co and the DAWG have already put effort into discussing rule change proposals, this paper also introduces concepts from those discussions that we think warrant feedback from a wider group before including in a Statement of Proposal.

2. D+1 Background

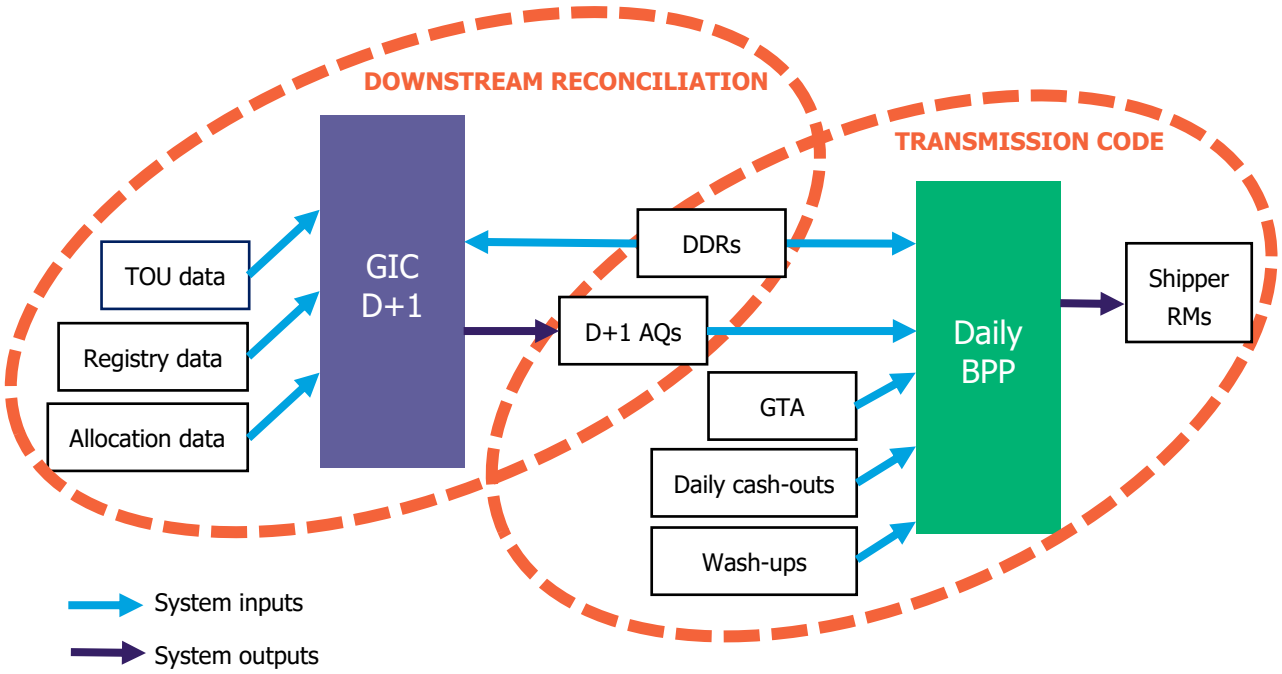
2.1 D+1 pilot

The genesis of the D+1 pilot was the introduction of market-based balancing (MBB) to the Maui Pipeline Operating Code (MPOC), which put additional incentives (daily cash-outs at a premium to market prices) on welded parties and, by extension, shippers, to conduct primary balancing. However, shippers lacked information regarding their daily mismatch positions and their share of any daily cash-outs, making it difficult to self-balance.

For mass market shippers, the introduction of MBB exacerbated an existing issue, that they did not have good information throughout the month about their customers' usage or their pipeline positions. Before MBB, shippers would only find out after the end of the month their:

- downstream allocations at allocated gas gates (which include an allocation of UFG that is difficult to predict)
- running mismatch throughout the month
- share of any cash-outs and other BPP charges
- adjustments to running mismatch due to interim and final wash-ups

In the months prior to the commencement of MBB, Gas Industry Co worked with shippers and Vector Transmission, via the DAWG, to establish the D+1 pilot. We put in place a sequence of daily information flows (illustrated in the diagram below) that would result in the timely publication of retailer gas gate allocations and shipper running mismatch positions.



The D+1 pilot interfaces with downstream regulatory arrangements, governed by the Rules, and commercial arrangements, governed by the Gas Transmission Code (GTC). It comprises:

- a system to calculate D+1 allocations at allocated gas gates, established and owned by Gas Industry Co and now operated by the Allocation Agent
- a system to perform daily BPP calculations, established by Vector and now owned and operated by Firstgas
- the Daily BPP Data Agreement between Firstgas and Gas Industry Co, which requires Gas Industry Co to perform D+1 allocations in accordance with the D+1 Business Rules and supply the results to Firstgas each day
- the MBB D+1 Pilot Agreement, a variation to the GTC, which creates a contractual nexus for shippers linking D+1 allocations, daily BPP calculations, and wash-ups
- a commitment by Gas Industry Co to use the special allocation process under the Rules to ensure that D+1 allocations can be treated as 'allocation results' under the GTC for Firstgas's billing process

2.2 GTAC

The stated intent when the D+1 pilot commenced in 2015 was that its performance would be reviewed after a couple of years and, if it proved beneficial, then amendments would be made to the Rules to codify the daily allocation arrangements.

This plan was overtaken by the purchase, in 2016, of the Maui and Vector pipelines by Firstgas, the subsequent GTAC development and review processes, and finally the implementation project for the associated IT system, TACOS.

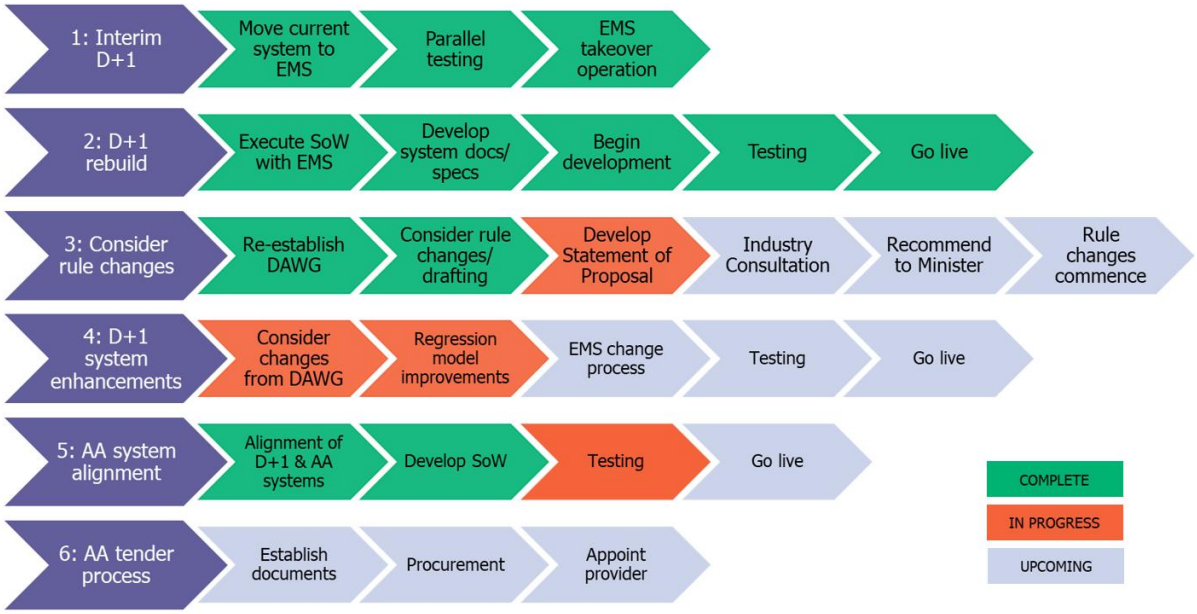
GTAC sought to codify the Firstgas elements of the D+1 arrangements as well as introducing further tools for shippers to manage their mass market positions. Gas Industry Co's focus during that period was keeping the D+1 pilot in a steady state until GTAC was bedded in and ensuring that our own elements of D+1 were consistent with the new code and IT system.

We committed to continuing the pilot for at least 12 months after the GTAC go live date in order to re-evaluate the benefits of D+1 against the backdrop of new commercial arrangements on the pipelines.

The decision by Firstgas to permanently suspend implementation of GTAC and TACOS meant that, in 2021, Gas Industry Co could return to evaluating the D+1 pilot.

2.3 D+1 project

In early 2021, the Gas Industry Co Board approved a project to transition D+1 to a more stable and reliable set of arrangements. The project covers three strands – technological, contractual and regulatory – and is progressing in multiple phases, as illustrated in the diagram below.



Recognising that the pilot had become a critical part of industry processes, the first priority was replacing the proof-of-concept D+1 system with a secure and reliable IT solution and moving responsibility for performing D+1 allocations to the Allocation Agent. We felt that these improvements to the operation of D+1 were essential in the short-to-medium term regardless of the long-term future of D+1 arrangements.

The new system went live in December 2021. The upfront funding of the system build and implementation was met from Gas Industry Co reserves to avoid any additional cost on industry participants. The ongoing costs, paid from the Gas Industry Co levy to the Allocation Agent, are currently around $6,000 per month.

2.4 DAWG

In the second half of 2021, we reconvened the DAWG to discuss proposals for amending the Rules to codify the D+1 allocation process.

DAWG members were generally supportive of the rule changes proposals and other improvements that were discussed, some of which were surfaced in the original DAWG meetings back in 2015. However, due to COVID-19 restrictions, the 2021 meetings were held online which we feel limited in-depth discussion. In addition, some of the proposals are material changes to the status quo so we consider that wider consultation and feedback is necessary in order to properly assess costs and benefits. For example:

- mandating installation of telemetry devices on the largest gas consumer installations
- changing the timing of allocations to bring an earlier wash-up (if D+1 allocations are to continue being used for transmission billing)
- instigating a 7-day BPP process

This options paper will also serve as an opportunity to provide preliminary views on these proposals.

3. Assessing problems and solutions

3.1 Regulatory process under the Gas Act

Typically Gas Industry Co's process begins with problem definition, determining a regulatory objective and identifying practicable options to meet the objective. We then carry out an assessment under section 43N of the Gas Act, including meeting our obligation to:

> […] ensure that the objective of the regulation is unlikely to be satisfactorily achieved by any reasonably practicable means other than the making of the regulation (for example, by education, information, or voluntary compliance)

The process is slightly different in the context of D+1, because a 'solution' – the D+1 pilot – already exists and has been operating for several years as an industry agreement. We therefore consider it appropriate to frame the process around the following questions:

- What problem is D+1 trying to solve?
- What are the alternatives to D+1?
- If D+1 is the preferred solution, then how should the pilot be transitioned to an enduring set of arrangements?

3.2 What problem is D+1 trying to solve?

As discussed in Section 2, the D+1 pilot arose in response to the implementation of MBB. The original problem was that in order to operate under MBB, shippers required daily information regarding the volumes of gas consumed by their customers that was timely and accurate enough to make commercial decisions, manage their balancing positions and so avoid or reduce exposure to cash-outs.

3.3 What are the alternatives to D+1?

If we accept that shippers require some level of daily information under current MBB arrangements, then any alternative to the status quo must fall into one of two categories:

- an alternative system for determining the daily quantities used by Firstgas so that shippers continue to receive daily information
- a change to the operation of MBB such that primary balancing is no longer a daily focus for shippers – in effect, removing the problem that D+1 is attempting to solve

These are the two approaches that are considered in Section 4 (Alternatives to D+1). We see the second bullet point as outside of the scope of the current regulatory process, but significant enough to explore at a high level and seek industry views on.

3.4 If D+1 is the solution, how should it be implemented?

As its name suggests, the D+1 pilot was not intended to be a long-term solution. But the length of time it has been running (with very few changes) is testament to the fact that it is a practicable and effective solution to the problem outlined above.

In order to move from a pilot phase to an enduring set of arrangements (if D+1 continues), we must consider what needs to change.

We believe that a practicable D+1 solution should include the following features:

- secure, reliable and efficient IT systems with appropriate service levels, performance management and the flexibility to adapt and improve
- an agreed set of rules for operating the systems and for information exchange between participants, including processes for handling errors, corrections etc.
- stable, reliable and enduring arrangements for managing interactions between the parties involved in producing D+1 allocations and daily BPP calculations, ie Gas Industry Co, the Allocation Agent, Firstgas, shippers
- funding arrangements to cover the operational costs of D+1
- governance arrangements that address: clarity of roles and responsibilities, appropriate change management and risk management, processes for dispute resolution, monitoring of compliance and enforcement and ensuring that D+1 remains fit-for-purpose in the future

Many of these features are inherent in the existing D+1 arrangements, so it is a case of building on what is already there. We think there are a number of ways to do this.

We identified three approaches based on permutations of the existing arrangements. All three options see the same daily processes taking place but differ in how the D+1 allocations are governed. The Firstgas BPP arrangements are assumed to stay the same under each option, but in reality could be amended independently from, or concurrently with, changes to the downstream elements of D+1.

The options are:

- a non-regulatory approach that continues to use contractual agreements as the basis for D+1.
- a core set of amendments to the Rules to cover the minimum requirements for operating D+1 as an official allocation.
- a broader set of amendments to the Rules, covering the core requirements in the previous option, but adding in the additional proposals discussed with the DAWG to improve the accuracy and efficiency of D+1.

These three options are described further in Section 5 (D+1 Implementation Options)

Q1:	*Do you agree with the characterisation of the problem?*
Q2:	*Are there other practicable alternatives to D+1 that we haven't considered?*
Q3:	*What do you consider are the key features of an enduring D+1 solution? Are there other ways to transition D+1 from a pilot stage that we haven't considered?*

4. Alternatives to D+1

4.1 Alternative source of daily information [OPTION 1]

The design principle for the pilot, and Gas Industry Co's model specifically, was to use the best information available on the day and estimate the rest. The overall performance of the D+1 model, while not as accurate as the initial allocation, is accepted by the industry as good enough for Firstgas to use for billing, at least until the interim wash-up.

While we have since discussed ways to incrementally improve allocation accuracy with the DAWG (such as increasing the quantity of daily telemetry data and exploring other modelling tools), we cannot conceive of an alternative design principle that would, at a reasonable cost, provide daily information that is *more* accurate than the status quo.

The corollary of this is that any alternative to D+1 that still allows for daily BPP calculations to occur would be less accurate, so in order to be considered practicable, it must offer other benefits that compensate for the reduced accuracy, such as increased timeliness or reduced cost.

In the absence of D+1 allocations, Firstgas would require a different method to determine daily allocations at shared delivery points in order to continue performing daily BPP calculations. We consider it would be possible to use a simple algorithm akin to the Specified Shipper Algorithm (SSA) developed for the GTAC, which allocated a proportion of deliveries to each shipper at a gas gate based on recent historical market share.

This option would be materially less accurate than the current D+1 but could potentially be:

- cheaper to run: if it was an algorithm built into Firstgas's daily BPP system it would not require a separate system or service provider as currently exists;
- more reliable: as there are fewer systems/moving parts; and
- timelier: results could be published earlier in the day, as soon as gas gate injection information is available, or even forecasted on the day of gas flow.

It is worth pointing out that the inherent inaccuracy in this approach would not last long; allocations (and so also shipper mismatch positions) would be washed up as they are now, once better data is available. This could be after either the initial allocation or the interim allocation.

4.2 No daily information

As mentioned above, shippers do not consider it practicable for MBB (in its current form) to operate effectively without some form of daily information for shippers to act on. In this section we consider a counterfactual scenario where, at some point in the future, there may no longer be a need for daily information.

The genesis for the D+1 pilot was that, with the introduction of MBB, balancing became a daily activity that required daily tools to manage it. But, if there is appetite for change, there may be ways to reduce the burden of MBB on shippers to the extent that D+1 and daily BPP

calculations are no longer necessary. It would require significant modifications to the operation of MBB: either a cessation of daily cash-outs, adjustment to tolerances to reduce their magnitude & frequency, or a different pricing mechanism that would leave shippers indifferent between being cashed out or not. In this situation, it may be acceptable to wait until after month-end and go back to using the initial allocation as the basis for BPP calculations.

This proposal may have wide ramifications for the operation of the transmission system but would also remove the cost and resourcing associated with performing D+1 allocations, daily BPP calculations and shippers' time managing daily positions.

Though we are interested in industry feedback, we believe it is beyond the scope of the D+1 workstream to re-litigate pipeline balancing arrangements. Gas Industry Co previously determined that MBB was materially better than the preceding status quo arrangements and, in our post-implementation review, we found that it had significantly improved primary balancing. Nevertheless, it is worth reflecting that a significant amount of daily activity (and cost) stems from the current balancing arrangements so they must remain fit for purpose going forwards.

If stakeholders felt strongly in favour of this option, then we could facilitate a discussion with Firstgas to determine if it is feasible from the perspective of the pipeline owner/operator.

4.3 Future gas market arrangements

One of the reasons for examining alternatives to D+1 rather than progressing immediately to a permanent D+1 solution is that the gas market has evolved in the years since MBB and the D+1 pilot commenced.

The current context of tighter gas supply and unconstrained capacity in the transmission system is the reverse of the environment in 2015. In the future, as the energy transition unfolds, gas market arrangements will continue to evolve. This may mean multiple fuel types in the pipelines, greater demands for flexibility for thermal peaking, consolidation in the retail market leading to fewer pipeline users, and step changes to demand as some consumers move away from fossil fuels. Downstream, the rollout of advanced metering infrastructure will mean retailers have access to more granular information about customer demand on a timely basis resulting in less need for estimation.

These changes will impact how the pipelines are operated, including potentially the form of balancing arrangements. We invite stakeholders to consider whether D+1 would still have a role to play if changes to balancing meant that managing daily positions was no longer a key concern.

Q4: Do you consider that Option 1 (an alternative source of daily information) is a reasonably practicable option that should be investigated further in the Statement of Proposal?

Q5: Do you have feedback on the alternative proposal to explore changes to balancing so that D+1 is no longer required?

Q6: Do you see value in D+1, even if MBB/daily cash-outs did not continue in the future? Are there any other factors that may impact the need for D+1 in the future?

5. D+1 implementation options

5.1 Contractual arrangements [OPTION 2]

The context for this option, aside from the requirement in the Gas Act to pursue non-regulatory outcomes, is that D+1 has been operating under a collection of industry agreements for several years, so it is reasonable to believe that it could continue to do so.

In reality, the majority of the current arrangements in the pilot sit outside of the scope of the Rules. The proposals to add 'D+1' to the Rules only refer to the downstream reconciliation elements of D+1 (as illustrated in the diagram in section 2.1). Gas Industry Co is not proposing to regulate the transmission provisions such as performing daily BPP calculations. It could therefore be argued that it is more consistent to establish the end-to-end arrangements as an extension of the GTC, rather than amending the Rules.

The major benefit of a purely contractual approach is that it offers greater flexibility than regulation, and leaves D+1 arrangements in the industry's control rather than being subject to Ministerial approval and the regulation making process in the Gas Act. This is an important consideration if D+1 is to endure but should remain dynamic, in anticipation of any future changes in the gas market.

To progress this option Gas Industry Co would facilitate industry discussion on how the current arrangements would need to evolve to meet the features of a permanent arrangement outlined in section 3.4.

5.2 Core regulation [OPTION 3]

The principle in this option is to make basic changes to the Rules to codify aspects of D+1 as it operates now, in order to provide key improvements such as a compliance & enforcement mechanism and funding via market fees.

The 'core' part of D+1 is allocation of gas quantities to retailers at shared gas gates. This is also the core part of the Rules (albeit the allocation methodology is different). The changes required to put D+1 into the Rules are therefore quite straightforward, as illustrated in the table below.

Examples of core rule changes

Subject	Change
Provision of consumption information for D+1 allocation	All available telemetry data must be supplied to the allocation agent each day
Provision of daily injection information for D+1 allocation	All available injection information must be supplied to the allocation agent each day
Allocation agent to use estimates	Update to include D+1 estimation
Correction of allocations by allocation agent	Update to clarify when D+1 allocations will be corrected

D+1 allocation methodology	Set out (at a high level) the method used for D+1 allocation
D+1 allocation	Obligation on allocation agent to perform D+1 allocation and publish reports

Making this core set of changes to the Rules, would ensure that:

- any costs associated with operating and maintaining D+1 can be recovered through market fees
- the obligations on participants to provide timely and accurate D+1 information are covered by the Compliance Regulations and by the audit provisions in the Rules
- D+1 allocations meet the definition of *allocation results* in the GTC, so special allocations are no longer required each month
- downstream D+1 arrangements are transparent, reliable and predictable for participants
- there is a stable regulatory framework for the D+1 and allocation systems, allowing Gas Industry Co and the allocation agent to explore further integration between the two systems

5.3 Broader regulation [OPTION 4]

This option is the approach favoured in DAWG discussions. It would codify the existing D+1 arrangements as per the previous option and introduce additional measures to improve accuracy and reliability. The additional elements would necessitate a greater number of changes to the Rules, as identified below:

Examples of broader rule changes

Subject	Change
Definition of allocation groups	Clarify requirements for different consumer types, eg TOU vs domestic customers with AGMI
Metering interrogation requirements	Introduce telemetry threshold – all consumers with consumption >20TJ pa must have telemetry device installed
Provision of consumption information for D+1 allocation	All AG1 ICPs must have telemetry interrogated each day and consumption information must be supplied to the allocation agent
Provision of consumption information for initial allocation	Amend obligations to supply data if initial allocation is only going to be used for producing GGRP/SADSVs
Provision of consumption information for interim allocation	Change timing to bring interim allocation forward

Accuracy of consumption information for initial allocation	Remove or amend if there are no longer mass market submissions for the initial allocation
Provision of daily injection information for D+1 allocation	TSO must supply validated injection information each day for all allocated gas gates
Allocation agent to use estimates	Update to include D+1 estimation
Correction of allocations by allocation agent	Update to clarify when D+1 allocations will be corrected
D+1 allocation methodology	Set out (at a high level) the method used for D+1 allocation
D+1 allocation	Obligation on allocation agent to perform D+1 allocation and publish reports

Making this broader set of changes to the Rules, would provide all of the benefits of the core changes and would also:

- increase the amount of telemetry data used by the D+1 system each day, therefore increasing the accuracy of TOU and non-TOU allocations
- provide better quality information on non-business days by placing an obligation on Firstgas to provide validated injection data each day. This obligation would necessitate 7-day availability of gas composition values, which (if published) could also increase the accuracy of customer TOU data on non-business days
- better address the inaccuracy of D+1 allocations by bringing forward a wash-up process using more accurate data

Individual proposals discussed by the DAWG are further outlined below. Although they are presented as a package, each item could be progressed (or not) independently if feedback indicates particular elements offer greater benefits than others.

We consider that the proposals could only be implemented via changes to the Rules, not through voluntary arrangements, due to the likely cost/compliance impacts and crossover with existing provisions in the Rules.

Threshold for installing telemetry

This proposal, to require the installation of telemetry devices on TOU ICPs with consumption over a certain threshold, has been discussed since the DAWG first began meeting in 2015.

The D+1 model uses all available actual data on the day, (gas gate injections and TOU consumption for ICPs with telemetry) and estimates everything else (TOU ICPs with no telemetry and mass market allocations). By requiring telemetry on the largest TOU sites, this would not only improve the allocations for those ICPs but would also produce a more accurate residual for mass market D+1 allocations.

The trade-off for the increase in accuracy is the cost borne by the retailer (and potentially passed onto the customer) for the installation and ongoing maintenance of a telemetry device. The general trend (without any regulatory obligation) in the C&I market has been an increase in

penetration of telemetry[1], but nevertheless, we do not want to put unnecessary costs on stakeholders. We therefore determined with the DAWG that the threshold should be higher than the existing threshold for installing a logger/corrector (10TJ per annum), at a level that provides a material improvement to D+1.

Previous analysis of the optimum volume threshold indicated that 20TJ per annum provided a good balance between capturing a large volume of gas consumption (to provide a boost to D+1 accuracy) while limiting the magnitude of the cost on stakeholders. With this threshold, 65 ICPs would require installation of telemetry.

Obligation to supply daily data

Along with the requirement to have telemetry on more sites, we would introduce an obligation on retailers to supply daily information if an ICP has an operating telemetry device. This would improve on the current arrangement where retailers are voluntarily providing telemetry data.

Retailers should be incentivised to provide telemetry data if they have it (to avoid being allocated volumes based on estimates), but around 10% of AG1 ICPs are not being supplied. This may be because the current Rules only require provision of TOU data on business day four of the month after the consumption period, so it is more cost-effective (bearing in mind that devices are largely battery-powered) to do a single month-end download.

Though it was not discussed with the DAWG, we would also envisage that once there are significant and reliable volumes of advanced metering data available, then these should also be supplied to D+1 to further improve allocation accuracy.

Merge initial and interim allocation

The overall goal of the staged allocation approach in the Rules is to balance timeliness and accuracy. Before D+1 existed, the initial allocation had to be produced as soon as possible after month-end so that the TSO could run its monthly billing process. In order to meet this timeframe, initial mass market submissions are mostly based on estimates rather than actual reads, so there is considerable swing between the initial and interim allocation.

If Firstgas continues using D+1 allocations for billing, there is less urgency around performing the initial allocation so we could likely achieve a better trade-off between timeliness and accuracy. Hence we are considering merging the current initial (M+1) allocation and interim (M+4) allocation to create a new interim allocation somewhere between the middle of M+2 and start of M+3. We believe this could have the following benefits:

- the first wash-up after D+1 would be more timely
- there is less seasonal change between the consumption period and the wash-up month
- the new interim would still have a majority of mass market volumes based on actual reads
- there would be fewer tasks/deadlines in the first week of the month (traditionally a busy time for reconciliation activities for the industry)

One important aspect of the initial allocation that would still be required is the calculation of the seasonal adjustment daily shape values (SADSV), which are used by retailers to profile meter read volumes into consumption periods. To continue producing the SADSV the allocation agent would just need gas gate injections and TOU submissions (mass market

[1] In October 2022, 57% of TOU ICPs had telemetry devices. In October 2017 it was 43% and in October 2012 it was 31%

submissions are not an input into the calculation), most of which it receives via the D+1 system, with the only additional data being AG2 volumes.

5.4 Pathway to 7-day BPP

As part of the proposed rule changes, we have suggested an obligation on Firstgas to provide validated injection data each day for all allocated gas gates. This would improve on the status quo, where the inputs to D+1 (injections and TOU data) are unvalidated on non-business days so the 'official' allocations for those days are not performed until validated data is made available the following business day.

This proposal would be beneficial for the accuracy of D+1 allocations but the clear message from shippers, in the DAWG and other forums, is that they want the daily BPP process, not just the D+1 allocation process, to be performed on non-business days as well as business days.

Gas Industry Co supports a move to 7-day BPP, but we do not think it fits within the scope of the Reconciliation Rules to include an obligation on Firstgas to perform a commercial transmission process. Amending the GTC would be the appropriate avenue for this change.

As illustrated in the diagram in section 2.1, we believe the boundary of the downstream part of the process to be providing D+1 allocations based on validated injections. This is now an almost entirely automated process. Other inputs to the daily BPP calculations, such as the provision and confirmation of GTA information, require manual processing/information exchange.

Our understanding is that Firstgas is currently engaged in system development work to improve and automate aspects of their daily BPP process. This is analogous to the Gas Industry Co project last year to replace the pilot D+1 system with a more robust solution. We understand that this will be a necessary prerequisite before Firstgas can make a commitment to providing 7-day BPP calculations.

Q7: *Do you have a preference for, or feedback on, any of the options identified in Section 5?*

Q8: *Do you consider that the options identified are reasonably practicable options that should be investigated further in the Statement of Proposal?*

Q9: *Do you have any comments on the additional measures outlined to improve the accuracy and reliability of D+1? In particular, please provide any evidence to support a determination of the costs and benefits of these proposals*

Questions

Question	Comment
Section 3 – Assessing Problems & Solutions	
1. Do you agree with the characterisation of the problem?	
2. Are there other practicable alternatives to D+1 that we haven't considered?	
3. What do you consider are the key features of an enduring D+1 solution? Are there other ways to transition D+1 from a pilot stage that we haven't considered?	
Section 4 – Alternatives to D+1	
4. Do you consider that Option 1 (an alternative source of daily information) is a reasonably practicable option that should be investigated further in the Statement of Proposal?	
5. Do you have feedback on the alternative proposal to explore changes to balancing so that D+1 is no longer required?	

6. Do you see value in D+1, even if MBB/daily cash-outs did not continue in the future? Are there any other factors that may impact the need for D+1 in the future?	
Section 5 – D+1 Implementation Options	
7. Do you have a preference for, or feedback on, any of the options identified in Section 5?	
8. Do you consider that the options identified are reasonably practicable options that should be investigated further in the Statement of Proposal?	
9. Do you have any comments on the additional measures outlined to improve the accuracy and reliability of D+1? In particular, please provide any evidence to support a determination of the costs and benefits of these proposals	

About Gas Industry Co

Gas Industry Co is the gas industry body and co-regulator under the Gas Act. Its role is to:

- Develop arrangements, including regulations where appropriate, which improve:
    - the operation of gas markets;
    - access to infrastructure; and
    - consumer outcomes;
- Develop these arrangements with the principal objective to ensure that gas is delivered to existing and new customers in a safe, efficient, reliable, fair and environmentally sustainable manner; and
- Oversee compliance with, and review such arrangements.

Gas Industry Co is required to have regard to the Government's policy objectives for the gas sector, and to report on the achievement of those objectives and on the state of the New Zealand gas industry.

SUBMISSIONS CLOSE:
31 January 2023

SUBMIT TO:
consultations@gasindustry.co.nz

ENQUIRIES:
info@gasindustry.co.nz

+64 4 472 1800 • info@gasindustry.co.nz • www.gasindustry.co.nz
Level 8, The Todd Building, 95 Customhouse Quay, PO Box 10 646, Wellington 6143

Gas Industry Co.