PROTOCOL FOR USER CUMULATIVE IMBALANCE (CI) STACKS

NSW & ACT GAS RETAIL MARKET

PREPARED BY: MARKETS

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FINAL

Introduction

Purpose of this Protocol

The purpose of this protocol is to provide users, including self-contracting users (**SCUs**), with an overview of new processes that have been put in place for the publication of two User Cumulative Imbalance (**CI**) Stacks on the AEMO website and to assist users with their compliance obligations under the Gas Retail Market Procedures – NSW & ACT (**Procedures**).

About this Protocol

This protocol should not be treated as a substitute for the Procedures –which set out participants' obligations in full. References to the relevant Procedure clauses have been provided in this protocol where appropriate. This protocol will be published on the AEMO website, www.aemo.com.au.

Table of Contents

Background

Daily Imbalance, Cumulative Imbalance and Participant Imbalance Amount

A user's Daily Imbalance (**DI**) is the difference between a user's input and withdrawal quantity plus the user's share of operational balancing gas. Under **Clause 8.8.1**, the network operator provides AEMO with information on each user's DI for each network section for a nomination day. AEMO then calculates, for each user in each network section, the user's (provisional) CI for a nomination day (in megajoules) by adding the user's CI for the nomination day to its CI from the day before the nomination day.

A user's CI continues from one month to the next. Under **Clause 8.8.2(a)**, a user must use its reasonable endeavours to maintain a CI of zero for each network section. Under **Clause 8.8.6(a)**, if a user's CI at the end of a month exceeds the limit referred to in **Clause 8.8.6(b)** outlined below, AEMO may, by notice to the user, require the user to increase, limit or suspend deliveries of gas into, or withdrawals of gas from, the network section so as to return the user's CI to within that limit. **Clause 8.8.6(b)** states that the CI limit is the greater of: 30% of the average daily quantity withdrawn from the network section by or on behalf of a user during the relevant month; and 5 terrajoules of gas.

AEMO issues monthly letters to users, including SCUs, advising of their CI and whether any specific action is required by a user so as to reduce their CI. The two mechanisms by which a user can reduce its CI is to either engage in a "trade" (i.e. the user trades all or part of its CI with another user by the users making off-market arrangements with each other in accordance with **Clause 8.8.3**) or a "swap" (user applies to the PIM for a Participant Imbalance Amount (**PIA**) in accordance with **Clause 8.8.4**).

BRIC development

The then Business Rules Industry Committee (**BRIC**) of Gas Market Company (**GMC**) discussed the concept of a "User CI Stack" at its meeting on 13 February 2007. It was brought to the attention of the BRIC by a market participant that the process of CI swaps could be streamlined for users and SCUs, thereby enabling them to better manage their respective CI's.

The BRIC agreed that a formal trading system for PIA imbalances was not warranted, due to the anticipated high costs of developing and implementing such a system. Instead, the BRIC agreed that GMC (now AEMO) should issue a Protocol that would facilitate the publication of users' identities (but not their actual CI values) in the form of 'Stacks" (with positive, negative and zero CI's) on the GMC (now AEMO) website.

The "User CI Stacks" would be published monthly on the GMC (now AEMO) website under the members' area (i.e. requires a username and password). Feedback was sought from users and SCUs on a proposed high-level design for the User CI Stacks and incorporated into the final design. The BRIC agreed that the User CI Stacks should be implemented immediately as a Protocol, rather than a Rule (now Procedures) Change, so as to deliver a timely and low-cost solution to users and SCUs.

BRIC has since been replaced by the Gas Retail Consultative Forum , (**GRCF**).

Overview of the User CI Stacks

Information previously available to GMC members and SCUs

Previously, only a list of contact officers for users and SCUs had been published on the GMC website for imbalance trading purposes. With reference to the list, users and SCUs could approach one another to agree a trade and/or swap (in consultation with AEMO). The list of contact officers and overall process remains unchanged with the publication of this Protocol for User CI Stacks. It is, however, thought that the publication of the User CI Stacks will assist users and SCU in identifying potential counterparties to a trade or swap.

New information now available to AEMO members and SCUs

As mentioned above, the list of contact officers for users and SCUs will continue to be published on the AEMO website. In addition, two new User CI Stacks will be published:

- **Stack 1** will publish the identity of users and SCUs with positive, negative and zero CI's (i.e. three columns) according to their percentage share of all participants' CI's. Participants with positive or negative CI's will be ranked in descending order (i.e. from highest CI volume to lowest CI volume), while participants with a CI volume of zero will be listed in alphabetical order. It is important to highlight that no actual CI statistics will be published in the Stack — only identities.
- **Stack 2** will publish the identity of users and SCUs with positive, negative and zero CI's (i.e. in three columns) based on their CI position with respect to the prescribed limits for CI's published under **Clause 8.8.6(b)**. Participants with positive or negative CI's will be ranked in descending order (i.e. from highest CI percentage to lowest CI percentage), while participants with a CI percentage of zero will be listed in alphabetical order. As per Stack 1, no actual CI statistics will be published in the Stack — only identities.

Overview of Stack 1

As mentioned above, participants with positive or negative CI's will be ranked in descending order (i.e. from highest CI volume to lowest CI volume), while participants with a CI volume of zero will be listed in alphabetical order. Provided below is an example of how a participant's ranking in Stack 1 will be determined.

Assumptions:

- Assume there are 7 users with varying CI's, as assumed below:
    - User A = 10TJ; User B = -15TJ; User C = -8TJ; User D = 4TJ; User E = 0TJ; User F = 0TJ; and User G = 8TJ.

Calculations:

- With reference to all users with a positive CI, sum their CI's to obtain a total positive CI, and derive each user's percentage share of the total positive CI.
    - User A (10TJ), User G (8TJ) and User D (4TJ) have positive CI's.
    - The total positive CI is 22TJ.

- User A's percentage share is 45.5%, User G's percentage share is 36.4%, and User D's percentage share is 18.2%.
- As a result, the users' identities would be published as per the table below, noting that their actual CI is not published in any way.

- With reference to all users with a negative CI, sum their CI's to obtain a total negative CI.
  - User B (-15TJ) and User C (-8TJ) have negative CI's.
  - The total negative CI is -23TJ.
  - User B's percentage share is 65.2%, and User C's percentage share is 34.8%.
  - As a result, the users' identities would be published as per the table below, noting that their actual CI is not published in any way.
- Finally, identify all users with a zero CI and list them in alphabetical order.
  - User E and User F have zero CI's, therefore no calculations are required.
- As a result, the users' identities would be published as per the table below.

Users' Cumulative Imbalance (CI) Stack

Positive CI*	Negative CI*	Zero CI**
User 'A'	User 'B'	User 'E'
User 'G'	User 'C'	User 'F'
User 'D'		

* Users ranked in descending order (largest CI to smallest CI)
** Users ranked in alphabetical order

Overview of Stack 2

As mentioned above, participants will be ranked based on their CI position with respect to the prescribed limits for CI's published under **Clause 8.8.6(b)** which states that the limit of the CI at the end of a month should not exceed the greater of: 30% of the average daily quantity withdrawn from the network section by or on behalf of a user during the relevant month; *or* five terrajoules of gas per month. Under **Clause 8.8.6(a)**, if a user's CI at the end of a month exceeds this limit, AEMO may, by notice to the user, require the user to increase, limit or suspend deliveries of gas into, or withdrawals of gas from, the network section so as to return the user's CI to within that limit. Provided below is an example of how a participant's ranking in Stack 2 will be determined.

Assumptions:

- Assume there are 7 users with varying CI percentages, representing the PIM's calculation of the average daily quantity withdrawn from the network section by or on behalf of each user during the relevant month, as assumed below:
  - User A = 35%; User B = -35%; User C = -16%; User D = 8%; User E = 0%; User F = 0%; User G = 16%.

Calculations:

- Identify all users with a positive CI%.
    - User A (35%), User G (16%) and User D (8%) have positive CI percentages.
    - As a result, the users' identities would be published as per the table above, noting that their actual CI percentages are not published.
- Identify all users with a negative CI%.
    - User B (-35%) and User C (-16%) have negative CI percentages.
    - As a result, the users' identities would be published as per the table above, noting that their actual CI percentages are not published.
- Finally, identify all users with a zero CI% and list them in alphabetical order.
    - User E and User F have zero CI percentages.
- As a result, the users' identities would be published as per the table above.

Actual layout of the User CI Stacks

Attachment 1 at the back of this paper provides an example of the actual layout of the User CI Stacks. This is how they will appear on the AEMO website once published. As the example shows, Stacks will be published for both NSW Wilton and ACT Canberra network sections.

Accessing the User CI Stacks on the AEMO website

The User CI Stacks are available from the AEMO website and can be accessed as follows:

- Go to the AEMO website at www.aemo.com.au;
- Login to the members' area by following the links through "Retail Gas Markets" , then "Industry Information Participants Only", then "NSW and ACT", then click on the link to log on to industry pages. Type in your username and password;
- In the "Market Reports" section select "User Cumulative Imbalance (CI) Stacks" to open the page.
    - Click on the PDF file "User Cumulative Imbalance (CI) Stacks" for the current month to open the file and view the information.

Additional Information

Currency of the CI data

Participants' rankings in the User CI Stacks are based on the most current end-of-month CI data that is available from AEMO (i.e. provisional CI data will not be used). However, as this final data is published with an approximate 1-month lag, a participant's actual CI position may have changed since such time. As a result, a participant's ranking in the User CI Stacks may not be representative of their current CI position.

Role of AEMO

Under the Retail Market Procedures – NSW & ACT, AEMO is responsible for monitoring a user's efforts to maintain their CI within prescribed limits, as defined under **Clause 8.8.6(b)**. If a user's CI at the end of a month exceeds these prescribed limits, AEMO may, by notice to the user, require the user to increase, limit or suspend deliveries of gas into, or withdrawals of gas from, the network section so as to return the user's CI to with the prescribed limits. The role of AEMO is unchanged as a result of the publication of the User CI Stacks.

Mandatory disclosure of all participants' identities

Publication of the User CI Stacks is not a requirement under the Procedures, but an initiative of the then BRIC for the purpose of assisting participants manage their CI positions. Participants have agreed that publication of users' and SCUs' identities in the User CI Stacks be mandatory. However, each participant reserves the right to "opt out" of having their identity published in the User CI Stacks at any time by contacting AEMO (see 'Further Information" for contact details).

Cost of providing the User CI Stacks

The total cost to AEMO of providing the User CI Stacks is $4,000-$5,000 per annum. This is the total cost to the Market as a whole and not a per participant cost. As a result, SCUs' existing annual fees are not affected.

Further Information

Contact details

If you have any questions or would like further information on this Protocol, please contact AEMO:

Australian Energy Market Operator (AEMO)
Email: grcf@aemo.com.au

Attachment 1 – Example of the User Cumulative Imbalance (CI) Stacks

User Cumulative Imbalance Stacks

STACK 1 - NSW Wilton Network Section*		
Positive CI	Zero CI	Negative CI

STACK 2 - NSW Wilton Network Section**		
Positive CI	Zero CI	Negative CI

STACK 1 - ACT Canberra Network Section*		
Positive CI	Zero CI	Negative CI
Country Energy	-	ACTEWAGL Retail
EnergyAustralia	-	-
TRUenergy Australia Pty Ltd	-	-
-	-	-

STACK 2 - ACT Canberra Network Section**		
Positive CI	Zero CI	Negative CI
Country Energy	-	ACTEWAGL Retail
EnergyAustralia	-	-
TRUenergy Australia Pty Ltd	-	-
-	-	-

* Stack 1 - Users in the positive and negative CI columns are ranked in descending order (largest to smallest CI volume). Users in the zero CI column are listed in alphabetical order.

** Stack 2 - Users in the positive and negative CI columns are ranked in descending order (largest to smallest CI percentage). Users in the zero CI column are listed in alphabetical order.

Notes:

1. 28 October 2010 - Note that with the end of the No Operational Balancing Arrangement in NSW-Wilton network section, CIs are no longer accumulating under that previous balancing regime.

2. Publication of the User Cumulative Imbalance (CI) Stacks is not a requirement under the Retail Market Procedures (NSW and ACT) (**Procedures**), but an initiative of the Gas Retail Consultative Forum (GRCF - NSW & ACT) for the purpose of assisting users manage their Cumulative Imbalance positions. Users have agreed that publication of users' identies in the User CI Stacks be mandatory. However each user reserves the right to 'opt out' of having their identity published in the User CI Stacks at any time by contacting the Gas Rules Administrator.

3. Users' rankings in the User CI Stacks are based on the most current end-of-month Cumulative Imbalance data that is available. However, as this final data is published with an approximate 1-month lag, a user's actual Cumulative Imbalance position may have changed since such time. As a result, a user's ranking in the User CI Stacks may not be representative of their current Cumulative Imbalance position.

4. Under the Procedures, the Participant Imbalance Manager (PIM) is responsible for monitoring a user's efforts to maintain their Cumulative Imbalance within prescribed limits, as defined under clause 30.6(2). If a user's Cumulative Imbalance at the end of a month exceeds these prescribed limits, the PIM may, by notice to the user, require the user to increase, limit or suspend deliveries of gas into, or withdrawals of gas from, the network section so as to return the user's Cumulative Imbalance to with the prescribed limits.