Technical Supplement to the Victorian Gas Retail Market

Issue 1

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Version History

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1	Oct 2005	Document prepared to provide a more detailed explanation of the Victorian Gas Retail Market as a technical supplement to the Retail Guide

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Introduction

This guide provides a technical overview of the operational aspects of the Victorian gas retail market (the Retail Market) and is a technical supplement to VENCorp's Guide to the Victorian Gas Retail Market and VENCorp's Guide to the Wholesale Market.

Victoria's industrial, commercial and domestic gas customers have relied on natural gas as a major source of energy for over 30 years. With some 1.6 million customers and demand of over 220 Petajoules per year, Victoria has one of the largest gas markets within Australia. Residential use of natural gas, particularly for winter heating and hot water, is the highest of any State in the country.

In October 2002, the Victorian gas industry implemented Full Retail Contestability (FRC), which allows all Victorians who use natural gas to choose their gas retailer from all the gas retail businesses competing in Victoria.

1. What is the Retail Market ?

The purpose of the Retail Market is to provide all gas customers the ability to buy natural gas from a licenced Retail business of their choice. In exercising this right, systems and processes are needed that facilitate the delivery of gas to all customers in a manner that supports the contractual relationships established between the retailers, transmission pipeline owners, distributors and customers.

For customer choice to be successful, a system is required for tracking the commercial relationship between licensed Retailer businesses, Distribution businesses and each gas customer. End use customers, licensed Distribution businesses and Retail businesses alike, rely on these systems and processes to ensure that customer transfers can take place smoothly and that costs in the supply chain are correctly allocated and billed.

2. Where do the Retail Market Arrangements Apply ?

The Retail Market arrangements described in this document apply to the Victorian Principal Transmission System (PTS) and networks that have agreed to be covered. The PTS is operated by VENCorp and transports natural gas to the majority of all Victorian households and businesses. The PTS, depicted in red in Figure 1, transports gas from Longford in the east, to and from Culcairn in the north (connecting to the NSW transmission system) and Iona in the west (connecting to South Australia and Otway gas production and underground gas storage facilities).

The Retail Market arrangements can also apply to distribution networks[1] supplied by other Victorian transmission pipelines. Distributors with networks that are not directly connected to the PTS, such as networks that are supplied by the Eastern Gas Pipeline or the Carisbook to Horsham pipeline, can enter into an agreement with VENCorp for coverage of their systems.

This has the effect of extending the existing Gas Market Retail Rules to cover these networks and all parties within these networks.

For information on other retail gas market arrangements that are not part of the PTS scheme contact the Essential Services Commission (ESC). The ESC contact details are listed in Appendix 3 of this document.

Figure 1 - Victorian Gas Transmission Pipelines

[1] Distribution Networks are licensed owners and operators of lower pressure pipelines. In general, these pipelines are connected to the PTS and supply gas to end use customer premises (see section 3 for greater detail).

3. Who are the Participants in the Retail Market?

3.1. Overview

The Retail Market in Victoria primarily involves the following participants:

- Victorian Energy Networks Corporation (VENCorp) as the Market Operator;
- Retail businesses;
- Distribution businesses;
- Gas Customers (end users);
- The Essential Services Commission (ESC) as the regulator of the Retail Market;
- Transmission Pipeline owners; and
- National Electricity Market Management Company Limited (NEMMCO) – as the operator of the FRC Hub.

3.2. VENCorp (Victorian Energy Network Corporation)

The Victorian Energy Networks Corporation is a statutory body established under the Victorian Gas Industry Act to operate the principal gas transmission system, to independently operate the gas wholesale market and facilitate retail contestability. As facilitator of the Retail Market, VENCorp manages customer transfers and a range of other Retail Market functions including the administration of the consultative change processes for Retail Market rule development.

3.3. Retail Businesses

Retail businesses buy gas in bulk from gas producers or the wholesale gas market, which is then sold to end use customers. In managing the delivery chain from the production facilities to individual end user sites, Retail businesses transport gas through the PTS and the wholesale gas market that is managed by VENCorp. Retail businesses also arrange for the transportation of gas leaving the PTS through haulage contracts with Distribution businesses.

Retail businesses are licensed by the ESC and they are responsible for the relationship with end use customers. To this end, Retail businesses manage customer billing and customer transfers.

3.4. Distribution Businesses

Distribution businesses own and operate the lower pressure distribution networks that transport gas from transmission pipelines to end-use customers within their networks.

Distribution businesses are responsible for installing, maintaining and reading meters within their networks, provision of energy data to VENCorp and the Retail businesses, and services to confirm meter identification and address information for customer transfer purposes.

3.5. Gas Customers (end users)

Most gas customers are connected to gas distribution networks and purchase gas from their Retail business of choice.

A small number of large gas customers have elected to participate directly in the wholesale gas market. These are called 'Market Customers' and must register with VENCorp to participate in the wholesale gas market.

Market Customers are responsible for sourcing their own gas, and making commercial arrangements for transportation of the gas through the transmission and distribution networks to their premises.

3.6. Essential Services Commission (ESC)

The ESC is Victoria's independent economic regulator. In addition to other duties, the ESC has oversight of the Retail Market. It is the Commission's role to regulate the distributors' prices, set service standards as well as manage licensing arrangements for the distribution and sale of gas to end use customers in Victoria.

In the Retail Market its responsibilities include:

- issuing and enforcing Retail and Distribution Licences and Industry codes;
- approving the Retail Market Rules;
- publishing industry performance reports; and
- establishing minimum commercial standards for the supply of gas to customers, which cover commercial terms and conditions such as billing periods, disconnection processes, complaints and privacy.
- Approving Distribution & Retail Tariffs.

3.7. Transmission Pipeline Owners

Transmission Pipeline Owners (TPOs) own the high-pressure haulage pipelines used to transport the gas between injection (e.g. well-head or storage facilities) and withdrawal points (e.g. distribution pipelines, another transmission pipe or storage facilities). TPOs have a limited role in the Retail Market. They are involved to the extent that they use the energy data provided by the Distribution Businesses to VENCorp for charging use of system fees, levied against the traders and retail businesses transporting gas through the high pressure pipelines.

3.8. NEMMCO (National Electricity Market Management Company Ltd)

NEMMCO's primary role is in the electricity industry. In the gas industry, NEMMCO is the owner and operator of the FRC Hub, a sophisticated electronic messaging system used to provide transaction messaging services between Retail businesses, Distribution businesses and VENCorp. Retail businesses and Distribution businesses are required under their licences to utilise the FRC Hub for business to business (B2B) transactions. All users of the FRC Hub must have their systems certified for interaction via the FRC Hub. Arrangements must be made with NEMMCO to undertake the necessary system tests to achieve certification.

4. What are the Retail Rules?

The Victorian Gas Market Retail Rules, the Retail Rules, are the approved regulatory standards that place fundamental obligations on VENCorp, Distributors and Retailers for collecting, calculating and providing end customer meter related information to relevant participants, and for the management of customer transfers between competing Retailers.

4.1. Why are the Retail Rules needed?

The successful operation of the Retail Market relies on a structured protocol for managing the ever-changing relationships between Victoria's 1.6 million customers and their Retail business of choice.

In the main, the Retail Market is governed by a set of processes and attendant responsibilities, which are specified in the Gas Market Retail Rules (Retail Rules). The underpinning technical requirements for these processes and responsibilities are detailed in the Gas Industry Protocol (GIP).

4.2. Are the Victorian Retail Rules aligned with other markets?

The Retail Market Consultative Committee (RMCC) is a committee that is used by the VENCorp Board in its management of the Retail Rules and as such it is required to keep abreast of developments and rule changes in the electricity retail markets and gas retail markets in other jurisdictions. This is achieved through consultative forums and through advice from common industry representatives. This focus on the broader industry enables proposals for changes in the Victorian gas retail market systems and/or rules to be shared with other jurisdictions and vice versa. Where practicable, the RMCC supports the convergence of systems and processes used in the various gas and electricity markets in Australia.

4.3. What do the Retail Rules Cover?

The Retail Rules have been separated into four chapters, which are:

Chapter 1 - General

- provisions governing the timing of implementation of various provisions of the Retail Rules;
- obligations with regard to the Gas Interface Protocol (GIP);
- dispute resolution procedures; and
- procedures for changes to the Retail Rules.

Chapter 2 - Trading Rules

- obligation with regards to meter reading;
- calculation and provision of energy data;
- data storage;
- access to/provision of data; and
- profiling requirements/methodology.

Chapter 3 - MIRN (Meter Installation Registration Number) Discovery

- MIRN allocation;
- making MIRN discovery requests; and
- responding to MIRN discovery requests.

Chapter 4 - Customer Transfer

- making requests for customer transfers;
- objections to transfer requests; and
- processing/registration of customer transfers.

Copies of the Retail Rules are available from the VENCorp website or by contacting VENCorp. See Appendix III for details.

4.4. How are the Retail Rules changed ?

The Retail Rules and the GIP need to evolve and change over time as the Retail Market develops. For that reason, the Retail Rules contains its own rule change and GIP change process, which includes a consultative process to ensure that industry, has appropriate input.

As shown in Figure 2 below, the Retail Market Consultative Committee has three industry-working groups to facilitate market development through changes to the Retail Rules and the GIP:

- The Gas Transactions Protocol Working Group (GTPWG);
- The Information Technology Development Forum (ITDF); and
- The Rules Working Group (RWG).

These workgroups report to the RMCC, which in turn, reports to the VENCorp Board. VENCorp's primary role in the change process is to act as a change facilitator providing the necessary secretariat services for the RMCC to ensure that changes are registered, communicated, documented, evaluated and authorised.

The Retail Rules change process can be summarised as follows:

- Changes to the Retail Rules and the GIP are usually initiated in and developed by the working groups and sent to the RMCC for acceptance;
- Changes accepted by the RMCC are presented to the VENCorp Board for their endorsement;
- Changes endorsed by the VENCorp Board are then submitted to the ESC for public consultation and final approval prior to publication in the Victorian Government Gazette.

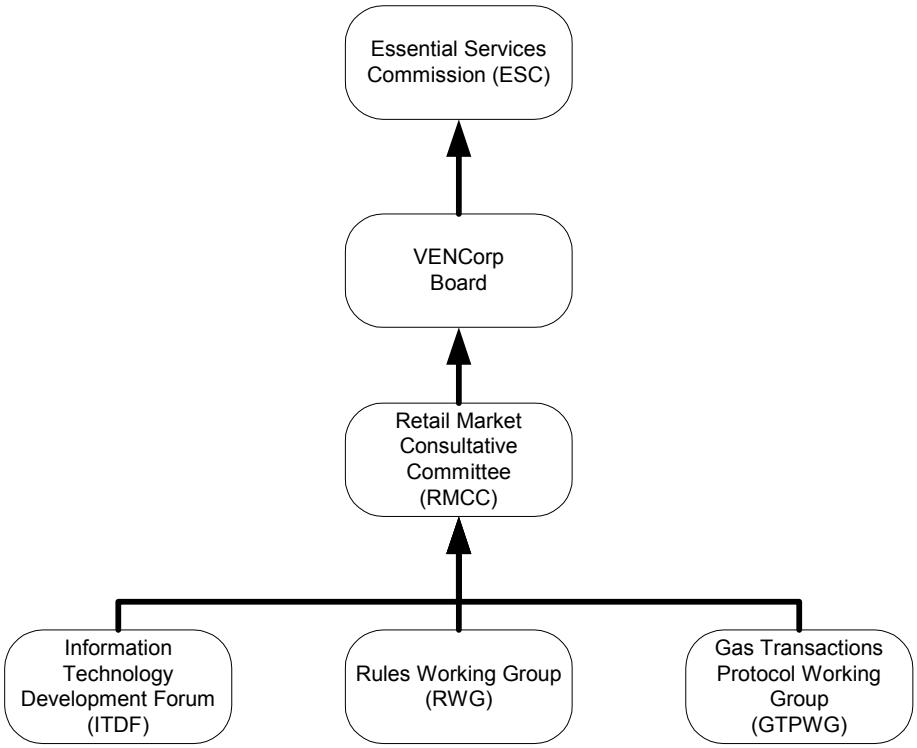

Figure 2 - Retail Market Governance Structure

4.5. What is the Gas Interface Protocol ?

The GIP details the technical standards and business processes that enables retail and distribution businesses and VENCorp to transfer information between Participant's systems. This includes customer meter readings, service orders and customer transfer transactions.

The principal head-of-power for the Retail Rules is the Victorian Gas Industry Act. The Retail Rules (and GIP) were created under this Act, and therefore all licensed participants in the Retail Market must abide by and are bound by the Retail Rules and the GIP.

The GIP is made up of the three Participant Build Packs.

- Participant Build Pack 1 details the industry agreed business processes.
- Participant Build Pack 2 describes transactions between participants and VENCorp; and
- Participant Build Pack 3 describes transactions between participants and the system architecture.

The Retail Rules and the GIP are published on the VENCorp website.

4.6. How can the GIP be changed?

Like the Retail Rules, VENCorp maintains the GIP through the RMCC and all amendments to the GIP are considered by the RMCC. Any amendments to the GIP arising from the change process come into effect on the date of their publication on VENCorp's website or on a date specified by VENCorp when the changes are published.

All proposed amendments to the GIP are the subject of a set of tests to determine whether the change can proceed as a minor change in accordance with clause 1.2.2 of the Gas Market Retail Rules or whether the change has to follow the full change process, which includes public consultation and authorisation by the ESC[2].

If a GIP change meets the following criteria, then it can be classed as a minor change:

1. the change does not require amendment of the Retail Rules;
2. the change results in increased efficiency in the operation of the processes/systems implementing the Retail Rules;
3. the change removes any unintended impediments to the operation of the retail market;
4. the change does not result in an Industry expenditure that exceeds $100,000 per calendar year per participant;
5. the change does not adversely impact customers; and
6. the VENCorp Board must be satisfied that the change is feasible and not unreasonably costly to implement.

Any GIP change that satisfies the above tests is put to a formal vote at a meeting of the RMCC. If there is a unanimous vote in favour of the change from each segment of the industry, the proposed GIP change will then be recommended to the VENCorp Board for implementation.

When the VENCorp Board approves the change, it becomes enforceable under the provisions of the Retail Rules.

If a change proposal fails the above test, the same consultation process is applied. However, after the VENCorp Board has approved the change, it is then submitted to the ESC for authorisation. The ESC then conducts its own consultative process as required under the Essential Services Commission Act before making a decision.

[2] Scheme for the Development of the Retail Rules – PTS

4.7. Working Groups and Forums

4.7.1. Retail Market Consultative Committee (RMCC)

The RMCC has representatives from the Gas Industry and Customer Representatives. It operates under a formal constitution and acts as an advisory committee to the VENCorp Board on issues related to:

(a) The development and review of rules and procedures ("Gas Market Retail Rules") required for the operation and administration of gas retail contestability in Victoria;

(b) The development of recommendations on the principles for charges to be imposed by VENCorp and VENCorp's cost recovery;

(c) Co-ordination of industry based retail systems and processes; and

(d) Co-ordination of industry retail issues.

The RMCC has been established to operate in accordance with a set of formal procedures and voting protocols. Membership of the RMCC consists of:

- A Chairperson appointed by VENCorp (following discussion with industry);
- Three "incumbent" or "former franchise retailer" representatives;
- Two "independent" or "non-franchise retailer" representatives (initially nominated by the Energy Retailers Association of Australia);
- One VENCorp representative;
- Three Distributor representatives (nominated by the licensed Victorian Distributors); and
- One end-use customer representative (initially nominated by the ESC's Customer Consultative Committee).

Where appropriate the RMCC can invite interested parties as observers.

4.7.2. Gas Transfer Protocol Working Group (GTPWG)

The GTPWG is a sub group of the RMCC and provides a forum to discuss enhancements to the GIP from a business process perspective. Members of this work group are drawn from industry with a focus on business requirements rather than technical issues. Most changes to the rules and the GIP are initiated in this working group.

4.7.3. Information Technology Development Forum (ITDF)

The ITDF is a sub group of the RMCC and provides a forum to discuss enhancements to the GIP from an IT and system process perspective. Members of this work group are drawn from industry with a focus on IT requirements and technical issues relating to current or proposed transactions. It also provides a technical forum to discuss IT issues that are related to the gas wholesale market.

4.7.4. Rules Working Group (RWG)

The RWG is a sub group of the RMCC and provides a forum to discuss potential changes to the Retail Rules that arise from proposed enhancements to the GIP or from other business process perspectives. Members of this work group are drawn from industry with a focus on regulatory issues and compliance issues rather than technical issues.

5. How is Information Shared in the Retail Market ?

5.1. Retail Market Transactions

Information flows within the Retail Market are conducted electronically, using the FRC Hub, to facilitate messages and transactions between the Retail businesses, Distribution businesses and VENCorp. In order for data transfers to be communicated this way, the messages or transactions that are sent between businesses must conform to a set of agreed standards. The GIP is the document that sets the standard for the transactions used within the market.

Within the market there are nine base transaction types. These transactions types are:

Transaction Type	Use
• MIRN Discovery	Used to find the Meter Installation Registration Number and other data based on a customer's address
• Customer Transfer	Used to transfer a customer from one Retail business to another
• Meter Data Delivery	Used to transfer meter data between Distribution and Retail businesses and VENCorp
• Service Orders	Used to manage the provision, maintenance and removal of gas services and meters and the referral of supply-related issues, such as disconnections and special meter reads
• Basic Meter Installation and MIRN Status Update	Used by a Distribution business to advise VENCorp of the status of meter installations
• Route and Site Information	Used to align meter reading route and site information between Distribution and Retail businesses
• Network Billing	Used by a Distribution business to provide detailed information at the MIRN level to the Retail business on network billing
• Customer Details	Used to update customer contact information between the Retail and Distribution businesses
• Data Synchronisation	Used by all participants to synchronise customer and meter data

These transactions allow the participants within the retail market to conduct their business electronically in an efficient manner.

5.2. The FRC Hub

Transactions specified by the GIP are sent to and from a Participants interface gateway to and from the FRC Hub, which routes the transaction to the intended recipient within the Retail Market as shown in Figure 3 below.

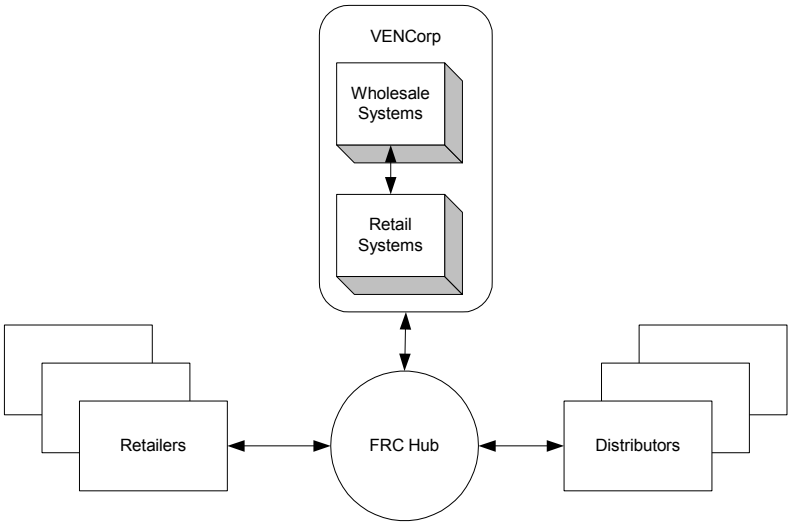

Figure 3 - Retail Market Hub

For instance, when a retailer wants a Distribution businesses to conduct a special meter read on its behalf, it creates a service order transaction requesting a meter read from the relevant Distribution business. This transaction is sent to the FRC Hub, which in turn delivers it to the Distribution business for action.

When the meter has been read the Distribution business creates a transaction with the meter reading that is sent to the FRC Hub. The FRC Hub then delivers that message to the relevant Retail business for processing.

5.3. What is Certification ?

Certification means that the Participants' capability has been validated and they are able to:

- Connect to the FRC Hub using Secure Socket Language (SSL), either via the Internet or the Victorian Gas Industry Wide Area Network;
- Send messages that conform to the current Message Services Specification (in ebXML), and the FRC B2B System (FBS) Architecture and Specifications documents (contained within Participant Build Pack 3 of the GIP); and
- Send documents that conform to the current schema (aseXML) and the additional validation rules described in Participant Build Packs 2 and 3 of the GIP. This will also include the validation of file structure and check for the presence of mandatory fields in any attached Comma Separated Values (CSV) files.

There are two types of test scripts that participants must run to demonstrate their systems capability. One type is to demonstrate messaging capability and the other *transaction* capability.

Participant Build Packs 1, 2 and 3 (available from the VENCorp website) describe the process flows, interface definitions and details of system architecture (including details of establishing connectivity to the FRC B2B System) that a participant will need in order to develop the transactions they wish to use.

5.4. When is FRC Hub Certification Necessary ?

This requirement to certify applies in cases where the Participant is a new entrant into the Retail Market or where an existing Participant modifies their software or hardware in a way that impacts on the creation or receipt of documents or notices managed via the FRC Hub.

The requirement to certify only applies to transactions that a Participant intends to use in the market. That is, where a Participant has no requirement to use a particular transaction there is no obligation to certify that transaction.

An example of this is where a Retailer intends only to win customers with interval-metered sites. In this case the Retailer may not wish to use the 'Basic Meter Special Read Service Order Transaction' and need not certify against it. However, a process of certification for basic notices is required to be accepted as a participant on the FRC market network.

It should be noted that Market Customers are not required to use the Gas FRC systems (VENCorp acts as their agent) and therefore have no systems requiring certification.

Details of the transactions that a participant needs to certify against are contained within the 'FRC Gas Hub Participant User Guide' available from the NEMMCO web site.

5.5. How is FRC Hub Certification Conducted ?

NEMMCO manages the FRC Hub system and conducts the certification process for the Retail Market. VENCorp is responsible for certifying Participants' systems, following advice from NEMMCO.

NEMMCO operates a semi-automated certification service. The service provides a test FRC HUB environment with "automated responders" that accept transactions and validate them against the provisions detailed in the GIP.

In order to connect to the Test HUB, and communicate with these responders, a participant must register their test gateway with the NEMMCO FBS Administration. This must be done through VENCorp, who will notify NEMMCO FBS Administration of the participant's request.

Once registered, participants wishing to use these responders must "book" a time and date through the NEMMCO FBS Administration. At the completion of the certification process, NEMMCO will provide advice to VENCorp on the status of these tests and VENCorp will advice the Participant whether or not they are to be certified against the transactions they have selected.

The 'FRC Gas Hub Participant User Guide', which is available from the NEMMCO website, provides further information about registration and the NEMMCO certification service.

6. Customers Transfers

In Victoria, there are approximately 30,000 gas customer transfers occurring every month. These include new customers moving into premises (move-ins), installation of meters to new sites (meter fixes) and the normal transfers of existing customers between Retail businesses.

6.1. How are Customers Transferred ?

Customer transfers, from one retailer to another, are facilitated using Retail Market Transactions through the FRC Hub. The key steps that must be undertaken to conduct a customer transfer are:

1. Obtain Customer Consent;
2. Identifying the Supply Point Identifier (MIRN);
3. Lodging a Customer Transfer Request;
4. The customer transfer process; and
5. The obtaining the Actual Meter Read used for transfer.

6.2. Customer Explicit Informed Consent

A Retail business can only conduct a MIRN discovery (eg for the purposes of preparing a quote) if it has received the customer's Explicit Informed Consent.

Similarly, a Retail business is only permitted to initiate a customer transfer after they have obtained the customer's 'Explicit Informed Consent' to proceed. The initiation of a transfer request includes the process of Metering Installation Registration Number (MIRN) discoveries and the delivery of a customer transfer request transaction.

Obtaining a customer's Explicit Informed Consent is a condition of all Retail Licences and is defined within the ESC's *Guideline No 10 – Confidentiality and Explicit and Informed Consent*.

6.3. Identifying the Supply Point

A MIRN is assigned to each customer supply point by the relevant Distribution business. The MIRN is the key identifier in most transactions within the Retail Market.

In order to initiate a customer transfer request a Retail business must know the customer's MIRN. If the Retail business cannot reliably obtain the MIRN directly from the prospective customer then the Retail business can make a "MIRN Discovery Request" to the Distribution business, by supplying the relevant address details. The Distribution businesses are obliged to provide information back to Retail businesses within prescribed times.

6.4. The Customer Transfer Process

Once the MIRN has been identified, the winning Retail business must then generate a customer transfer transaction, using the MIRN as the key identifier, to the FRC Hub.

This transaction is then lodged in the VENCorp systems and alerts the losing retailer to the impending transfer and gives them the opportunity to object, which may only be on the grounds of aged debt.

If no objection is received, then the customer will transfer if an actual meter reading is received within the allowable windows shown below.

Under the Retail Rules customer transfers can be requested for dates up to 66 business days in the future (called prospective transfers) or for dates up to 118 business days in the past (called retrospective transfers).

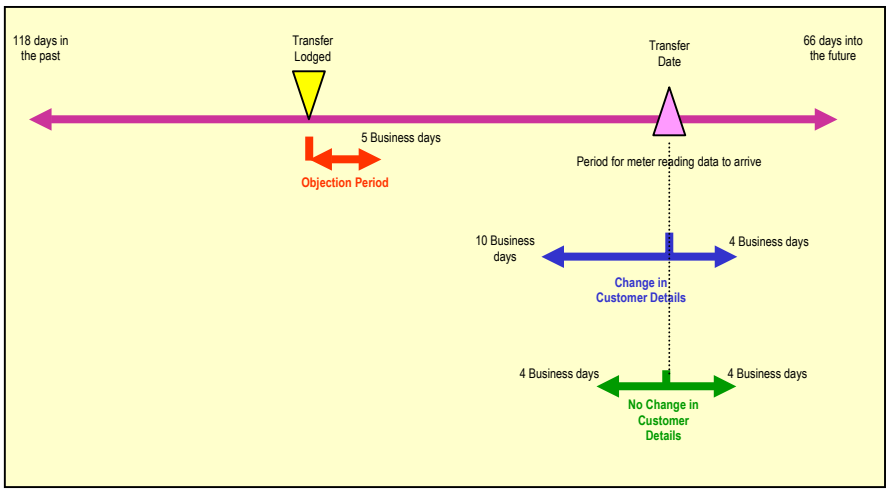

Figure 4 - Allowable Transfer 'Windows"

6.4.1. Prospective Transfers

Prospective requests for a customer transfer can be lodged by any Retail business. The proposed transfer date must be for a date in the future within 66 business days from the proposed transfer date.

When a transfer request is received, the VENCorp systems issue a notice to the current Retail business advising them of transfer request for one of their customers. The current Retail business has 5 business days in which to lodge an objection. The associated Distribution business also receives a notice of the pending transfer.

If no objection to the transfer is lodged by the Retail business currently supplying the customer, or any objection is withdrawn, the transfer will proceed.

Prospective transfers are lodged with VENCorp for a date on which a meter read is planned. This could be either a scheduled bi-monthly meter read or a special read, the date of which has been requested separately by the prospective Retailer.

The Retail Rules provide for 'windows' of several days around the nominated transfer date to allow for variation in the actual meter reading date.

For transfers where there is no change in customer information (i.e. an existing customer) the allowable "window" is from 4 business days prior to the transfer date and 4 business days after the transfer date.

For transfers where there is a change in customer information (i.e. a new customer or a 'move-in' customer) the allowable "window" is from 10 business days prior to the nominated transfer date and 4 business days after the transfer date.

If the meter is not read within this allowable window a 'read failure notice' is sent to the requesting Retail business and the Distribution business on the fifth day after the proposed transfer date. If the meter was read in that period, but the reading was not sent to VENCorp, the Distribution business can then supply the meter reading.

Within 10 business days of the 'Read Failure Notice' the requesting Retail business may withdraw the transfer request or submit a revised transfer date to retrospectively transfer the customer using the actual meter read.

6.4.2. Retrospective Transfers

Any Retail business can lodge a request for a retrospective customer transfer. There are three key criteria for lodging a retrospective customer transfer:

1. The nominated transfer date must be for a date no more than 118 business days prior to the transfer request date;
2. The Retailer must have been registered as a Retailer for the period covering the proposed retrospective transfer date;
3. The nominated date for a retrospective transfer must be a date for which an actual meter reading is available; and

If these conditions are met and the current Financially Responsible Organisation (Retailer) has not objected, then the customer will be retrospectively transferred and wholesale settlements will be revised to account for this transfer.

6.5. The Transfer Meter Read

This meter read, often called the Final Meter Read, is used for customer transfers. This reading is used to determine the final gas bill from the old Retail business and is used as the first meter read for the customer with the new Retail business.

This reading enables retail billing and settlements processes to be aligned with the transfer of the customer between the Retail businesses.

This meter reading must be an actual reading. Estimated read or customer reads are not accepted as valid reads for the purpose of customer transfers.

6.6. Example of a Customer Transfer Process

A simplified customer transfer process is outlined in *Figure 5*. Note that there are many variations depending on outcomes at each stage of the transfer process. This example is one variation representing a straightforward series of transactions.

Figure 5 - A Simplified Customer Transfer Process

6.7. Bulk Hot Water

In Victoria there are a number of multi-dwelling buildings with bulk hot water systems installed. In these sites special arrangements are in place to centrally heat water, which then flows through individual hot water meters and into the dwellings. There are no individual gas meters for the purpose of recording gas used to heat the hot water, only a large central master gas meter.

There are approximately 27,000 dwellings connected to this type of infrastructure. Since apartments using bulk hot water are not individually metered for the gas used to heat the water, customers are not able to individually choose their gas retailer. However, the body corporate is responsible for this gas supply and as a result is able to arrange for the master meter to be transferred to another retailer.

Special arrangements are negotiated by the retailer responsible for the master meter so that bills can be issued to customers for the energy used in supplying their hot water.

Billing of bulk hot water systems is covered in the ESC's Energy Retail Code and the Gas Retail Licences.

7. How is Energy Managed in the Gas Market ?

7.1. Measuring and Converting Gas to Energy

Measuring and converting gas to energy is a complex series of calculations that start with:

- Using meters to measure the flow of gas;
- Converting this flow to a standardised volume (which is dependent on the pressure, temperature and composition of the gas); and then
- Converting the standardised volume of gas to energy using the applicable Heating Value, which describes the amount of energy in a standard volume of gas.

In simple terms:

Energy (Joules) = Flow (F) x Pressure Correction Factor (PCF) x Heating Value (HV)

7.1.1. What Types of Gas Meters are there ?

There are two types of meters used in the Retail Market:

- interval meters; and
- basic meters.

Interval meters calculate and record consumption for each hour and basic meters accumulate consumption between two dates when the meter is manually read.

VENCorp has been assigned the role Meter Data Agent (MDA) for interval meters in the wholesale market and is responsible for reading interval meters, converting the meter readings to energy for use in wholesale market settlement and providing the data to both the Distribution and Retail business for network billing and retail billing purposes.

The Distribution businesses are responsible for reading basic meters according to a meter reading schedule (normally bi-monthly), converting the meter readings to energy and providing it to both Retail businesses and where applicable, VENCorp[3].

Benchmark Distribution Un-accounted for Gas (DUAFG) is added to all distribution meter readings for the purposes of wholesale market settlement.

[3] VENCorp only receives the energy data for second tier basic meters – see section 7.2.1

7.1.2. Interval meters

Large gas users (generally with consumption in excess of 5,000 GJ over a six month period) have interval meters installed. Large gas meters that have a data-loggers or flow computer that record the information necessary to calculate the energy consumption for each hour are called interval meters. This information can include gas volumes, temperature and pressure of the gas for each hour of each day.

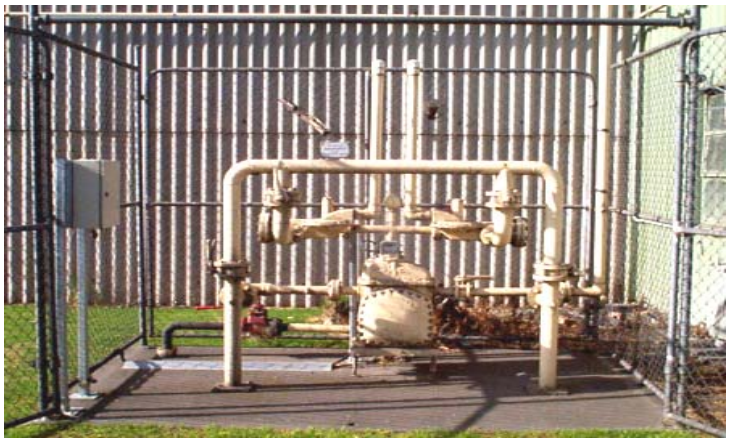

Figure 6 – Interval Meter (Large Gas Meter with Data Logger)

As MDA, VENCorp is responsible for reading interval meters, calculating the energy consumption, and making the data available to the relevant Distribution and Retail businesses via the MIBB. Some of the data-loggers have telemetry installed and are read daily while others are manually read twice a month.

VENCorp collects and processes metering information from these sites, applies the appropriate Benchmark Un-Accounted for Gas Factor (UAFG), Pressure Correction Factor and Zonal Heating Value and then provides this information to both the Retail and Distribution Businesses.

7.1.3. Basic Meters

Small to medium sized customers (which includes all residential customers as well as small commercial and industrial customers) have basic meters installed that record, or accumulate, flow without reference to time.

Each Distribution business is responsible for reading all basic meters in their network, generally on a bi-monthly basis, converting the readings into energy consumption and providing the information to the appropriate Retailer and, where applicable, VENCorp.

If the Distribution businesses cannot gain access to read a meter there are three methodologies they may use to estimate the meter readings. These methodologies are described in the Retail Rules - Attachment 4.

Figure 7 - Basic Gas Meter

7.1.4. Measuring Gas Flow

All gas meters are designed to record the flow of gas through that meter.

The flow of gas is measured and recorded for both basic and interval meters. Basic meters have a simple flow counter that accumulates the flow of gas. This type of meter is generally read every two months. By taking the current reading and subtracting the previous reading the result is the total flow of gas between these two dates.

For interval meters the flow computer records the flow measured at the meter in each hour. Some flow computers also convert the flow to standardised volumes and record these volumes each hour.

7.1.5. Converting Gas Flow to a Standard Volume

Flow information collected from meters must be converted to volume. This is done by taking the flow of gas measured by the meter and multiplying it by an appropriate Pressure Correction Factor (PCF) to calculate the standardised volume of gas for that period:

Standard Volume (V) = Flow (F) x Pressure Correction Factor (PCF)

7.1.6. Pressure Conversion Factor (PCF)

The PCF is a factor that defines the pressure, temperature and compressibility of the gas so that a flow can be converted to a standardised volume.

Basic meters use a standard PCF that relates to the outlet pressure of the metering installation.

On interval meters, where a flow computer is installed and there are pressure and temperature sensors, the PCF can be calculated dynamically using the information from the sensors. If there are no sensors, a standardised PCF is used that relates to the outlet pressure of the metering installation.

The standard PCFs are published in the Victorian Government Gazette, No 1 - 1 Jan 1999.

7.1.7. Converting a Standard Volume to Energy

Once the standard Volume of gas has been calculated, it is possible to convert that standard Volume to energy (Joules) using a factor called a Heating Value.

The Heating Value (HV) represents the energy per unit volume of gas.

The energy value of gas is calculated by multiplying the Heating Value (HV) of gas by the Standard Volume (V). That is:

Energy = Heating Value (HV) x Standard Volume (V)

7.1.8. Heating Value

The Heating Value (HV) is a factor that describes the energy contained within a standard volume of gas and can therefore be used to convert the standard volume to energy. Gas chromatographs analyse the gas and calculate the heating value at each injection point and other strategic locations on the transmission system for every hour of the day. A flow algorithm, developed by VENCorp, is used to calculate the Zonal Heating Value (HV) for each Heating Value Zone in Victoria for each hour of the day.

Each Custody Transfer Meter (CTM) falls into a specific Heating Value Zone or has a direct input from a gas chromatograph. This allows energy to be calculated at each injection and withdrawal point on the transmission system for each hour of the day.

Interval Meters located within distribution areas are also assigned to specific Heating Value Zones, so the Zonal Heating Value for each hour is also be applied to the Interval Meters for the same period.

VENCorp's meter database maintains the Heating Value Zone assigned to CTMs and Interval Meters for energy calculations for this purpose. VENCorp uses this information to calculate the energy at interval meters for each hour of the day.

VENCorp also uses this information to calculate and publish a daily state-wide average Heating Value for each day. The Retail Rules require the Retail and Distribution businesses to use this common Heating Value to convert basic meter volumes to consumed energy.

The conversion of volume to energy for basic meters is based on the average of a daily declared state-wide flow weighted heating value calculated and published by VENCorp for the relevant 'ReadFrom' and 'ReadTo' dates.

Each Distribution business takes the average of the set of VENCorp daily declared state-wide flow weighted heating values that encompass the consumption reading period of the basic meter and uses this average to convert the measured volume into an energy reading for wholesale settlement and retail billing purposes.

7.1.9. Distribution Un-Accounted for Gas (UAFG)

Distribution Un-Accounted for Gas (DUAFG), describes the amount of gas that is not accounted for within the Distribution system between the injection point and the withdrawal point due to variations in meter accuracy; i.e. between the Custody Transfer Meter (CTM) and the customer meter.

The Essential Services Commission sets these benchmark UAFG levels for each Distribution business. So, if a benchmark has been set at 5%, for every 95J measured at the customers meter 100J must have been be injected at the CTM – i.e. 5J (or 5%) of energy cannot be accounted for between the injection meter and the withdrawal meter.

VENCorp settles the wholesale market based on a Participant's withdrawals at the CTM. In order to do this the Distribution UAFG benchmarks must be applied to the customer meter reading, called the adjusted meter reading.

This is done so that VENCorp can calculate the Market Participants' withdrawals at the CTM for wholesale settlement. Distributors also invoice Retail businesses based on the adjusted meter readings.

7.2. How is Energy Allocated in the Gas Market?

Basic meters are read every second month, according to the meter reading schedule. However, as the market price of gas varies each gas day, VENCorp needs to convert two months worth of energy to a daily amount of energy for the purposes of monitoring each Retail businesses prudential exposure for each gas day, and to allocate energy on a monthly basis for wholesale settlement purposes. To enable this to happen, VENCorp profiles all basic meter readings to allocate consumption for each gas day

Where no basic meter readings are available, VENCorp estimates the consumption for each gas day using the Base Load and Temperature Sensitivity (BLTSF) process. As basic meters are progressively read, then the energy consumption is profiled from meter readings using the Net System Load (NSL).

VENCorp issues preliminary settlements statements 7 business days after months end and Final settlements statements 18 business days after months end. Distribution businesses provide bi-monthly meter readings to VENCorp for second tier customers, which are then profiled to gas days and estimates for consumption for each gas day where there are no Distribution business provided readings available. Typically, VENCorp estimates consumption for 40% of meters at Final settlement statements.

VENCorp undertakes a Revision Settlement at 118 business days after months end to profile as many Distribution provided meter readings as possible and to account for Retrospective Transfers. VENCorp still estimates consumption for any meters without a reading provided by the Distribution business, but this is typically less than 0.05% of all meter readings.

7.2.1. Determining a Retailers Injections and Withdrawals

Each Distribution network area has a Retail business assigned to that area as a Host Retail Business. Under these arrangements the Host Retail Business is responsible for all gas withdrawals that are not allocated to another retailer in that Distribution Business network.

As shown in Figure 6 below, customers belonging to the Host Retailer (Retailer X) in the Distribution Business Network are referred to as 1st Tier customers and all other customers belonging to other Retailer businesses (Retailer Y) operating in the same Distribution Business network are referred to as 2nd Tier customers.

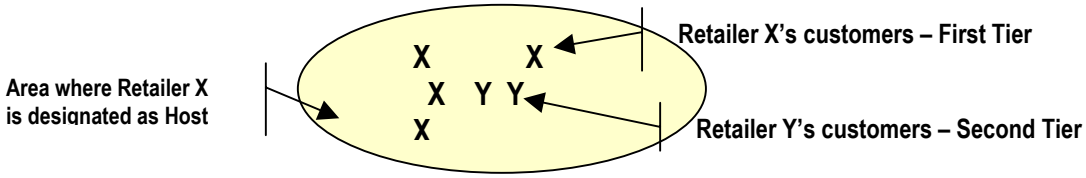

Figure 8 - First and Second Tier Customers

The energy that enters a distribution area flows through a Custody Transfer Meter (CTM) and is allocated to the retailer designated as host. The energy usage for this area is calculated from two sources.

Thus the total energy flowing through a CTM This can be shown as:

Total CTM Energy = Sum (1st Tier Interval Meters) + Sum (2nd Tier Interval Meters) + Sum (1st Tier Basic Meters) + Sum (2nd Tier Basic Meters)

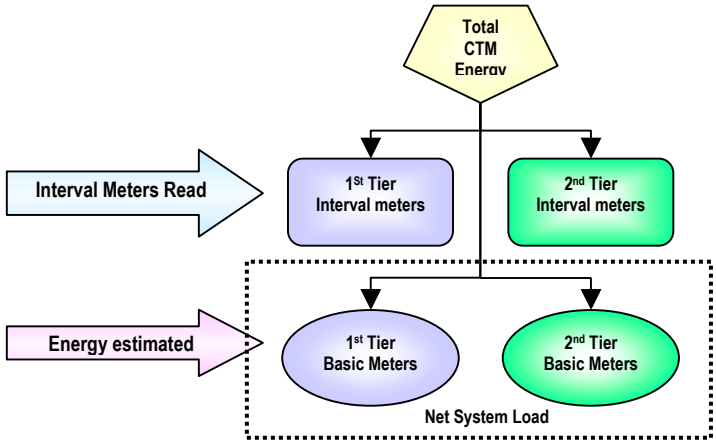

Figure 9 - Energy Measurement

For every gas day, all settlements are based on the injections and withdrawals measured at the CTMs.

Where only one Retail business injects or withdraws at that CTM, then the energy measured at that CTM is directly assigned to that Retail business.

Where more than one Retail business injects or withdraws gas at a CTM, then the energy measured at that CTM needs to be allocated to the those Retail businesses. This is generally done in two main ways:

- For ***controllable injections or withdrawals,*** the energy is generally allocated by an Allocation Agent who is responsible for dividing up the total measured energy and assigning portions to each Retail business based on a set of agreed rules.
- For ***uncontrollable withdrawals***, VENCorp allocates the gas under the MSO Rules.

VENCorp's process to allocate energy under the MSO Rules is undertaken in the following manner:

Each Retail Business is directly allocated withdrawals of any its customers that have interval meters. This usage is adjusted for Distribution Un-Accounted for Gas

(DUAFG). The energy that remains is that which has been consumed by customers who have basic meters. This is called the ***Net System Load (NSL)*** for that Distribution business.

Non-Host Retail businesses are allocated all the second tier profiled energy (for meter readings that are available) and the estimated energy (for meters where readings are not available). This energy is adjusted for DUAFG.

The Host Retail business is allocated the difference between the second tier energy and the Net System Load for that Distribution Business network.

VENCorp then aggregates the allocated interval and basic metered energy to determine the total injection and total withdrawals of each Retail business operating in the Distribution Business network area.

7.2.2. Estimation Methodologies

Within the VENCorp settlement systems, energy (for basic meters) is estimated until an actual meter reading is provided by the Distribution Businesses. This is calculated using a Base Load and a Temperature Sensitivity Factor to estimate consumption. When an actual meter reading is received and the meter readings cover the settlement period then the Net System Load profiling method is used.

7.2.3. Base Load and Temperature Sensitivity Factor (BLTSF) Estimation Process

A Base Load and Temperature Sensitivity factor is used to calculate an estimate the energy consumption used by a second tier basic meter when no actual meter readings are available.

This calculation methodology is based on the following factors[4] provided by the Distribution Businesses for each site in their network:

- Base Load; and
- Temperature Sensitivity Factor.

These factors are derived using historical consumption data for each site. Where there is insufficient historical data available to determine a base load and temperature sensitivity factor, a Customer Characterisation is used to generate an average base load and temperature sensitivity factor for use at the site

The Customer Characterisation is used by each Distribution business to describe the way in which new customers who have not yet generated historical data consumes gas. In the retail market this characterisation is split between urban / rural and domestic / commercial.

The Base Load describes the amount of gas a customer consumes all the year round. The Temperature Sensitivity Factor describes the relationship between the customer's consumption of gas and the temperature as measured by Effective Degree Days (EDDs). Domestic customers, for instance, consume gas for hot water and cooking consistently all year, and for heating during the colder seasons.

[4] The details describing how these factors are used is contained within Retail Rules – Attachment 6.

By knowing these factors it is possible to estimate the energy a customer is using each day. An estimate is calculated for each second tier basic metered customer that has not been provided with an actual meter read and subtracted from the energy measured through the CTM. This information is used by the VENCorp settlement systems to settle the wholesale gas market for both the second tier retailers and nominated host or first tier retailers.

For further information refer to Retail Market Rules, Attachment 4 – Approved Estimation Methodology

7.2.4. Net System Load (NSL) Profiling Process

Distribution businesses provide VENCorp with the energy consumed by all second tier basic meters between a start and end date, which is generally over a two-month period. This second method of estimating energy usage is used when VENCorp has these two sets of meter readings for a basic meter and the meter readings fall within the settlement period.

To allocate this energy from a two-month period to the daily amounts VENCorp requires for wholesale settlement purposes it uses the Net System Load profiling methodology as set out in the Retail Rules.

The Net System Load (NSL), for each Distribution business network area, is the difference between the total energy injected into that Distribution network and the energy consumed by the interval meters (adjusted for DUAFG) – see Figure 9:

Net System Load = Total Energy – Interval metered energy

VENCorp determines how much of the provided basic meter energy is allocated to each gas day according to the NSL profile for that day. This is done by proportionally allocating the energy for each gas day to all the basic meters according to the Net System Load as shown in the diagram below.

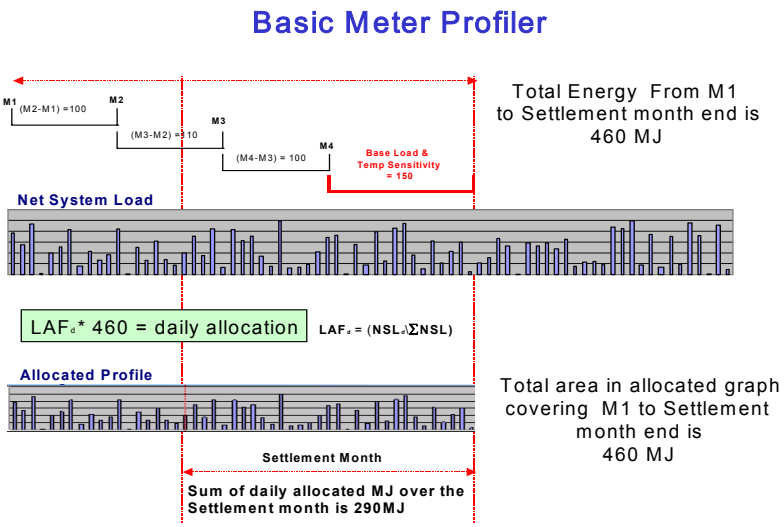

Figure 10 - Net System Load Profile

In simple terms, the net system is calculated from hourly data and represents the gas usage for all basic meters within a distribution area. Since this usage is calculated from hourly data it also has a shape across, or usage, for each hour of each day, as shown in the figure below.

Since VENCorp has the energy consumed by the second tier basic meters, it is able to proportion this usage across the two-month period against the NSL. This has the effect of giving the basic meters a daily usage, or profile, that is shaped like a scaled down version of the NSL

This is done for all the second-tier basic meters. The resulting usage is then added up and subtracted from the NSL, leaving the usage for all first-tier meters.

For further information refer to Retail Rules, Attachment 6 – Net System Profile Methodology.

8. Wholesale Gas Market Settlement

For wholesale settlements purposes, gas withdrawals from the transmission system for each Retail business must be determined on a daily and monthly basis and, from late 2006, will be profiled within each day. Gas withdrawals are allocated to the larger customers based on their interval meter readings with the balance allocated to all the remaining customers, who have basic meters.

As several Retail businesses may operate in each distribution network, VENCorp uses profiles (as described in Section 7) to allocate consumption to each Retail business for their customers (with basic meters) for wholesale settlement purposes. Settlement revisions provide for reconciliation of consumption with meter readings after all basic meters have been read for that settlement period. This is done 118 business days after months end.

In order to 'Settle' the Wholesale Gas Market, VENCorp performs daily and monthly processing of the energy injected into, and withdrawn from, the Principal Transmission System (PTS). To achieve this daily and monthly processing, hourly data is provided to VENCorp from several sources, including Custody Transfer Meters (CTMs) and customer interval meters.

VENCorp settles the wholesale market based on the difference between a retail businesses injections and withdrawals across a day. This quantity of gas is then priced using the daily market rate to establish how much the Retail business owes the market or is owed by the market for that gas day.

The timing for settling the market is:

- VENCorp issues a preliminary settlement statement on the 7th business day after month end;
- VENCorp then issues the final statement no later than 18 business day after months end;
- the Market Participant must pay VENCorp the amount required by the final statement by 12.00 pm two days after receiving the final settlement statement; this is generally the 20th business day.

Full supporting data is issued with each settlement statement to enable independent confirmation of all settlement amounts. This is provided through reports on the VENCorp MIBB,

For more information regarding Wholesale Market Settlements, refer to Chapter 3 – Market and System Operations Rules (MSOR).

9. In Conclusion

VENCorp has prepared this guide as a supplement to the high level guide to assist those who are interested in gaining a more detailed understanding of how the Retail Market works.

It is recommended that interested parties also review the reference documents listed in Appendix 1.

For further information about this guide or the Retail Market, please contact VENCorp. Our contact details are on the final page of this guide.

Appendix I - Retail Market Reference Documents

There are a number of reference documents under the Gas Market Retail Rules and additional documents that have been prepared as guides. Participants should be familiar with these guides. These documents have been categorised into five areas:

Gas Retail Market reference documents

- Rules and Guidelines;
- Essential Services Commission Documents;
- Technical Reference Documents;
- Business Process Reference Documents;
- Change Management reference documents; and
- Other relevant documents.

Rules and Guides:

The following documents can be accessed from the VENCorp website:

- Gas Market Retail Rules;
- VENCorp's Guide to the Victorian Gas Retail Market
- Market and System Operations Rules; and
- Guide to the Wholesale Market.

Gas Market Retail Rules

Gas Market Retail Rules are made under the Gas Industry Act and provide the standards for collecting, calculating and providing metered related information from customers, and for the management of customer transfers between competing retailers.

VENCorp's Guide to the Victorian Gas Retail Market

This is a high-level overview of the Victorian retail gas market. This guide is indented to assist participants and stakeholders understand the broad concepts and working of the Retail Market.

Market and System Operations Rules (MSOR)

The MSO rules are the Victorian Gas Industry Market and System Operations Rules. The purpose of these rules includes the following objectives:

- to provide an efficient, competitive and reliable market;
- to regulate the operation of the market;
- regulate the activities of Participants in Victoria and in relation to the transmission system and the market; and
- to regulate the operation of the transmission system in Victoria by VENCorp in a way which:
  - minimises threat to system security;
  - encourages the achievement of the market objectives; and
  - enables access to the transmission system and market.

VENCorp's Guide to the Wholesale Gas Market

This document summarises the functionality of the Victorian wholesale gas market and provides a brief overview of the market arrangements.

Technical Reference Documents

- The Gas Industry Protocol (GIP) and associated Participant Build Packs*;
- FRC HUB Operational Terms and Conditions;
- FRC B2B System Certification*; and
- FRC B2B Communication Procedures*.

Gas Interface Protocol (GIP)*

The GIP is a protocol referred to under clause 1.2.1 of the Gas Market Retail Rules and describes the agreed set of technical standards and business processes that enables participants to pass information between each other in a reliable manner. The GIP is made up of a set of documents called Participant Build Packs.

Participant Build Packs*

- **Participant Build Pack 1** details the industry agreed business processes. The Process Flows or Process Maps identify the work processes and data flows in the Gas Retail Market environment. These documents detail each logical step in the process required to deliver various gas services that have material impact on the

* *These documents only available to Gas Industry Participants;*

ability of the full retail contestability arrangements to operate efficiently. These data flows cover systems that require electronic interfaces or manual processes.

- **Participant Build Pack 2** concentrates on the transactions that support interaction between Participants and VENCorp and includes basic interface definitions.
- **Participant Build Pack 3** focuses on the B2B interactions, and the system architecture and that apply across the FRC HUB infrastructure.

The table below list the artefacts that constitute the Gas Interface Protocol. This list is maintained on the VENCorp website with the effective date for each component.

Requirement	Documents
Participant Build Pack 1	GTPWG Process Flow Table of Transactions. This contains: - Table of Transactions, Table of Elements, List of Job Enquiry Codes, Address Elements and MIRN and Meter states
	GTPWG Process Flow Diagrams
	CSV Data Format Specification
Participant Build Pack 2	Participant Build Pack 2 Interface Definitions
	Participant Build Pack 2 Usage Guide
	Participant Build Pack 2 Glossary
Participant Build Pack 3	B2B System Specification
	B2B System Architecture
	Participant Build Pack 3 Interface Definitions
Guidelines for Development of A Standard for Energy Transactions in XML (aseXML)	The Guidelines for Development of A Standard for Energy Transactions in XML (aseXML) which participants have subscribed to for Victorian Gas is available from www.NEMMCO.com.au/asexml
AseXML Schemas	The complete set of aseXML schemas and examples which participants have subscribed to for Victorian Gas is available from www.NEMMCO.com.au/asexml

Table 1- Artefacts which constitute the Gas Interface Protocol

FRC Hub Operational Terms and Conditions

The "FRC Hub Operational Terms and Conditions" is a referenced document within the Gas Market Retail Rules (clause 1.2.5 (b)(c)(d) & (e)). VENCorp under clause 1.2.5(b) is required to establish and publish a set of terms and conditions to which users of the FRC Hub must comply.

FRC B2B System Certification*

This document provides information on the certification requirements specific for participants wanting to participate in the Victorian Retail Market.

FRC B2B Communication Procedures*

This document provides an overview of the communication process used by the FRC B2B System Administrator (FBS Admin) to enable communication to take place between FBS Admin, its service providers, participants in the Victorian Gas Market and VENCorp. This procedure identifies the preferred communication pathway and contact points for each party.

FRC B2B System Participant Problem Resolution Guide*

The Participant Problem Resolution Guide is a quick reference guide that allows participants to follow consistent steps in the identification of technical problems. The document also assists participant in resolution of the issue.

* *These documents only available to Gas Industry Participants*

Business Process Reference Documents

- MIRN Structure;
- Meter Reading Validation Methodology - Hi/Lo Test Parameters;
- Consumed Energy Scenarios - Distribution business to VENCorp and Retail businesses; and
- Heating Value Zone.

MIRN Structure

The Meter Installation Registration Number (MIRN) provides a unique identifier for each supply point within the Victorian Gas Retail Market. It provides a reference against which other essential data can be linked and managed, and is crucial to the accurate management of customer transfer, supply point change control and data aggregation and transfer. Whilst the document is specific in detailing the intelligence underpinning the MIRN, it is a reference guide only and not to be used as a technical design document.

Meter Reading Validation Methodology - Hi/Lo Test Parameters.

The "Meter Reading Validation Methodology – Hi/Lo Test Parameter" is a reference document within Gas Market Retail Rules and describes the agreed high and Low parameters that a Distributor must apply when validating a meter reading in accordance with an approved validation methodology as described in the Rules (see Attachment 3 of the Rules).

Consumed Energy Scenarios - Distributor to VENCorp and Retail Businesses.

The "Consumed Energy Scenarios - Distributor to VENCorp and Retail Businesses" is a reference document within Gas Market Retail Rules and describes the validation rules that apply with respect to the consumed energy data that Retail Businesses and VENCorp receive from the Distribution Businesses. It also defines the method used to adjust generated consumption where the sum of generated values does not match the net system load in a Distribution Network for any single day.

Heating Value Zone

The "Heating Value Zone" is a reference document within Gas Market Retail Rules. It defines the Heating Value zones used in wholesale market settlement within the state of Victoria. VENCorp calculates a state declared Heating Value for the PTS.

Change Management Reference Documents

- Terms of Reference for RMCC Industry Working Groups*;
- Gas Interface Protocol Change Consultative Process; and
- Industry System Release Management Framework*.

Terms of Reference for Industry Working Groups (RMCC, GTPWG, ITDF and RWG)*

Each working group has its own defined "Terms of Reference" that describe the responsibilities of that group. Each group is an integral part of this change management process. These documents are available from the VENCorp website.

Gas Interface Protocol (GIP) Change Consultative Process.

The Gas Interface Protocol (GIP) Change Consultative Process describes the process to be used for the specific purpose of amending the GIP where the impact of the change is of a technical and minor nature.

Industry System Release Management Framework.*

The Industry System Release Management Framework outlines a program of "high level" activities that needs to be undertaken prior to implementing changes to IT systems and/or business processes that currently support the operation of the Victorian Gas Retail Market.

Essential Services Commission Documents:

- ESC Energy Retail Code;
- ESC Victorian Gas Distribution System Code;
- Code of Conduct for Marketing Retail Energy in Victoria
- Gas Full Retail Contestability - Guideline No. 9: - Development of Retail Gas Market Rules; and
- Gas Industry Guideline No. 10: Confidentiality and Explicit Informed Consent.

ESC Energy Retail Code

This document sets out the minimum customer service standards that must be followed by retailers in their dealings with customers. It outlines the rights and obligations that customers have in their dealings with a retailer.

* *These documents only available to Gas Industry Participants*

ESC Victorian Gas Distribution System Code

This document sets out the minimum standards for the operation and use of the gas distribution system including requirements for installation and maintenance of connections and metering installations, disconnections and reconnections, and the provision of metering data. The document also sets out the minimum terms and conditions, other than tariffs, which the distributor will provide distribution services pursuant to its Access Arrangement.

Code of Conduct for Marketing Retail Energy in Victoria (October 2004)

This document aims to ensure high standards are met in the marketing of gas to consumers of less than 10 TJ per year. The document reflects the responsibility of retailers to all consumers that is crucial to maintaining and enhancing confidence in the retail gas industry. It aims to ensure that all retailers are bound by the same standards.

Gas Full Retail Contestability Guideline No. 9: Development of Retail Gas Market Rules

This guideline is intended to clarify the way in which the Essential Services Commission will perform its function, and exercise its power, to approve:

- a scheme for the development by VENCorp, and implementation, of retail gas market rules;
- a scheme for the development by the gas distribution companies, and implementation, of retail gas market rules; and
- completed retail gas market rules submitted to it by VENCorp or a gas distribution company, under Section 48MI or 48MJ of the Gas Act.

Gas Industry Guideline No. 10: Confidentiality and Explicit Informed Consent

This guideline relates to the use and disclosure of personal information about customers by gas retail businesses.

Other Documents

- The Victorian Gas Industry Act;
- FRC – Gas Hub - Participant User Guide and
- Guidelines for Development of A Standard for Energy Transactions in XML (aseXML).

Victorian Gas Industry Act

The Gas Industry Act is an Act of Parliament that describes the regulatory framework that operates in the Victorian gas industry. The Act requires persons who distribute or sell gas to obtain a licence from the Essential Services Commission, or a licence exemption. The Act created the Victorian Energy Networks Corporation, the independent system operator for the Victorian gas wholesale market. Key provisions

include a consumer safety net for domestic and small business customers in the transition to effective retail competition.

FRC – Gas Hub - Participant User Guide.

This document is managed by NEMMCO and contains information for participants in Australian Energy Markets to connect and make use of the FRC Hub infrastructure put in place to accommodate the Victorian and South Australian / Western Australian retail gas markets. It provides an overview of the system, and specific information for participants who wish to initiate a connection to the FRC hub in order to operate in the relevant markets.

Guidelines for Development of A Standard for Energy Transactions in XML (aseXML)

This document is managed by NEMMCO and contains information for participants in Australian Energy Markets on how standard transactions are developed in the retail market.

Appendix II - Glossary

AseXML	A standard for energy transactions in Extensible Markup Language
B2B	Business to Business Transaction
B2M	Business to Market Operator (i.e. VENCorp) Transaction
Base load	In relation to a distribution supply point, means the level of gas consumption at that supply point that is not affected by the weather.
Benchmark UAFG	A factor regulated by the Victorian ESC which describes a set UAFG level for gas metering in each Distribution business. See section 7.1.9
CATS	Customer Administration and Transfer System that facilitates the Retail Customer transfer process
CTM	Custody Transfer Meter
CSV	Comma Separated Values
Customer	Any party who purchases energy and consumes energy at particular premises. Customers can deal through Retailers or may choose to become Market Participants in their own right and take on the retailing functions themselves.
Customer Characterisation	In relation to a basic-metered customer, whether the customer is: (a) metropolitan or non-metropolitan (where "metropolitan" refers to the Melbourne metropolitan area), as published by the Department of Infrastructure; and (b) residential or business, where residential means the primary use of the consumed energy is for household purposes and business means the primary use of the consumed energy is for commercial type purposes as determined by the retail business for customer billing.
Distribution Business	The owners/operators of the distribution pipelines, which transport gas from the transmission pipelines to the end consumer.
Distribution Loss Factor	Factor which describes the approved loss rate for a Distribution Business and is also known as Unaccounted for Gas (UaFG)
DoI	Department of Infrastructure
ebXML	Electronic Business XML. Protocol designed to facilitate B2B interactions
EIC	Explicit Informed Consent This is the consent that a customer provides to a retailer to gather usage data about the customers demand or transfer the customer to another retailer
Energy Safety Victoria (ESV)	Technical Regulator responsible for Gas and Electricity Safety
ESC	Essential Services Commission – replaces the Office of Regulator General

FBS	FRC B2B System (HUB for sending messages (Transactions) between participants)
FBS Admin	FRC B2B System Administrator
FRC	Full Retail Contestability
FRC HUB	The FRC HUB is the network facility through which VENCorp, each Market Participant and Distributor can deliver and receive structured Business to Business transactions utilising the protocols and formats as defined in the Gas Interface Protocol
FRO	Financially Responsible Organisation
Gas Day	Has the same meaning as the MSOR
GIA	Gas Industry Act
GIP	Gas Interface Protocol - The Gas Interface Protocol is a protocol required under clause 1.2.1 of the Victorian Retail Gas Market Rules. The GIP describes an agreed set of technical standards and business processes that enables participants to pass information between each other in a uniform method
GTPWG	Gas Transactions Protocol Working Group
Heating Value	The energy contained within a standard volume of gas. See 7.1.8
Host Retailer	The Retailer to whom residual energy is assigned in accordance with the MSOR for the purpose of settlement.
ITDF	IT Development Forum
Market Information Bulletin Board (MIBB)	A VENCorp electronic facility (bulletin board on internet) for the publication of information to Market Participants, including information relating to market forecasts and outcomes, system conditions etc
Market Participant	A party who is eligible, by registration with VENCorp, to trade gas on the spot market by submission of nominations and price offers to VENCorp in accordance with the MSO Rules
MDA	Meter Data Agent – responsible for collecting, validating, substituting and converting meter data to energy.
MIRN	Metering Installation Registration Number that uniquely identifies the supply withdrawal point
MIRN Attributes	Means the following data items: • TUoS Zone; • Heating Value Zone; • MIRN Classification; • Profile Type; • MIRN Status; • Meter Installation Type; • Average Daily Load;

	• DUoS Tariff Code; and • MIRN Address
MIRN Address	Means the physical location of the supply or withdrawal point
MSO Rules	The Victorian Gas Industry – Market and System Operations Rules
NEM	National Electricity Market
NSL	Net System Load
Participant	A person who is registered with VENCorp in accordance with the MSO Rules.
PBP	Participant Build Pack
PCF	Pressure Correction Factor See 7.1.5
PTS	Principal Transmission System (gas) - Victoria's primary high pressure gas transmission system. It transports gas between the natural gas processing plant at Longford, in the southeast of Victoria, the underground storage facility in the south west of the State, and the inter-connection with the NSW system at Culcairn, north of Albury.
Retail Rules	Gas Market Retail Rules.
Retailer	Those selling the bundled product of energy services to the Customer.
RMCC	Retail Market Consultative Committee
RWG	Rules Working Group
Settlement	The determination of trading imbalances and payments to be made as a result of spot market transactions and market participation.
Second Tier Supply Point	A second tier supply point is a supply point for which the wholesale energy is assigned to a Retailer other than the (host) Retailer responsible for the residual wholesale energy in the geographic area in which the second tier supply point is located. This relationship is defined in greater detail in the MSOR
Supply Point	A point where gas is supplied to a customer and is generally metered
Spot Market	A competitive market administered by VENCorp to facilitate the physical balancing through trading of gas where gas is bought and sold at a variable price
SSL	Secure Sockets Layer. Provides for encrypted transmission of documents over the internet and authentication using x509 certificates
Temperature Sensitivity Factor	In relation to a distribution supply point, means the incremental gas consumption at that supply point that is the GJ per EDD calculated in accordance with Attachment 6

TPO	Transmission Pipeline Owner
UAFG	UnAccounted for Gas (see Distribution Loss Factor)
V2B	VENCorp to Business or Business to VENCorp Transaction (also known as a B2M Transaction)
VENCorp	Victorian Energy Networks Corporation, the market and system operator

Appendix III - Retail Market Contact Information

Victorian Energy Networks Corporation (VENCorp)

General enquiries, including queries on retail and wholesale gas market processes

Head Office
Level 2, Yarra Tower
Siddeley St
World Trade Centre
Melbourne, Vic 3005
Tel + 61 3 8664 6500
Fax + 61 3 8664 6511

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National Electricity Market Management Company Limited (NEMMCO)

NEMMCO provides FRC Hub services to the Retail Market

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