



## **Report on the Controls Placed in Operation**

As at 31 December 2013

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## Section I Purpose, scope and use of this report

Transpower New Zealand Limited ('Transpower') has established a new physical energy commodity exchange business, emTrade. The purpose of this report is to describe the emTrade business, including the emTrade Exchange Platform (the 'Platform') and the system of internal controls which pertain to services provided by emTrade to the users of the Platform ('Participants'). In order to meet the needs of the energy and financial industries, emTrade has worked to provide a high standard of service in its systems. This report is intended for current emTrade users ("Participant Organisations") and Transpower's Board of Directors.

An independent audit was commissioned by Transpower in anticipation of the newly established emTrade business unit which commenced trading activity in November 2013. It serves accordingly to provide external validation of the integrity of the system and operations. PricewaterhouseCoopers Wellington (PwC) has been engaged to perform the audit.

The resulting report comprises the following sections:

- a. A report by management of emTrade which includes a description of the Platform and services provided by Transpower, including the system background, functionality and risk management as it relates to the Platform;
- b. an independent assurance report by PwC addressed to the Directors of Transpower; and
- c. details of the controls supporting each control objective (which have been determined with consideration of the Market Rules<sup>1</sup>), as well as the related procedures performed by PwC and the results of those procedures.

The scope covers controls directly related to the daily operation of the emTrade business, its compliance with the Market Rules and the information technology components which support the operation of the Platform. The controls of third parties and participants are out of scope. The independent assurance report has been prepared in accordance with the International Standard on Assurance Engagements (New Zealand) 3000 "Assurance Engagements Other than Audits or Reviews of Historical Financial Information".

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<sup>1</sup> The emTrade Market Rules\_ [www.emtrade.co.nz/assets/Uploads/emTrade-Market-Rules-Version-4.1-FINAL.pdf](http://www.emtrade.co.nz/assets/Uploads/emTrade-Market-Rules-Version-4.1-FINAL.pdf)

## Section II Report by the Directors of Transpower and Management of emTrade

We have prepared the accompanying description of Transpower New Zealand Limited's ('Transpower') emTrade Exchange Platform (the 'Platform') for user entities of the Platform who have a sufficient understanding to consider the description, along with other information, including information about controls operated by user entities of the system themselves, when obtaining an understanding of user entities' information systems.

We have prepared this system description with consideration of the emTrade market rules. We have mapped all of the rules and selected rules which are deemed to be contained in the emTrade market rules to related controls established by Transpower. We have identified activities where they do not have controls in place because they are not applicable to the service provided.

As stated in our description, Transpower uses Digiweb and YouDo to provide Information Technology support and infrastructure services. Our assertion includes only the controls and specified control objectives of Transpower and excludes the control objectives and related controls of Digiweb and YouDo.

We confirm, to the best of our knowledge and belief, that:

1. the accompanying description at pages 06 - 24 fairly presents the Platform for processing Participant organisation transactions as at 31 December 2013. The criteria used in making this assertion were that the accompanying description:
  - a. presents how the system was designed and implemented, including:
    - i. the types of services provided including, as appropriate, classes of transactions processed;
    - ii. the procedures, within both information technology and manual systems, by which those transactions were initiated, recorded, processed, corrected as necessary, and transferred to the reports prepared for user entities of the system;
    - iii. the related accounting records, supporting information, and specific accounts that were used to initiate, record, process, and report transactions; this includes the correction of incorrect information and how information was transferred to the reports prepared for user entities of the system;
    - iv. how the system deals with significant events and conditions, other than transactions;
    - v. the process used to prepare reports to user entities of the system;
    - vi. relevant control objectives and controls designed to achieve those objectives, as applicable, complementary user entity controls contemplated in the design of the service organization's controls;

- vii. controls that we assumed, in the design of the system, would be implemented by user entities, and which, if necessary to achieve control objectives stated in the accompanying description, are identified in the description along with the specific control objectives that cannot be achieved by ourselves alone; and
  - viii. other aspects of our control environment, risk assessment process, information system (including the related business processes) and communication, control activities, and monitoring controls that were relevant to processing and reporting transactions of user entities of the system.
- b. does not omit or distort information relevant to the scope of the system being described, while acknowledging that the description is prepared to meet the common needs of a broad range of Participant organisation, and may not, therefore, include every aspect of the system that each individual user entity of the system may consider important in its own particular environment.
2. the controls related to the control objectives stated in the description were suitably designed as at 31 December 2013. The criteria used in making this assertion were that:
- a. the risks that threatened the achievement of the control objectives stated in the description were identified; and
  - b. the controls identified in the description would, if operated as described, provide reasonable assurance that those risks did not prevent the stated control objectives from being achieved.

**James Whistler**  
**Manager, emTrade**  
Transpower New Zealand Limited  
20 March 2014

**Kieran Devine**  
**System Operator**  
Transpower New Zealand Limited  
20 March 2014

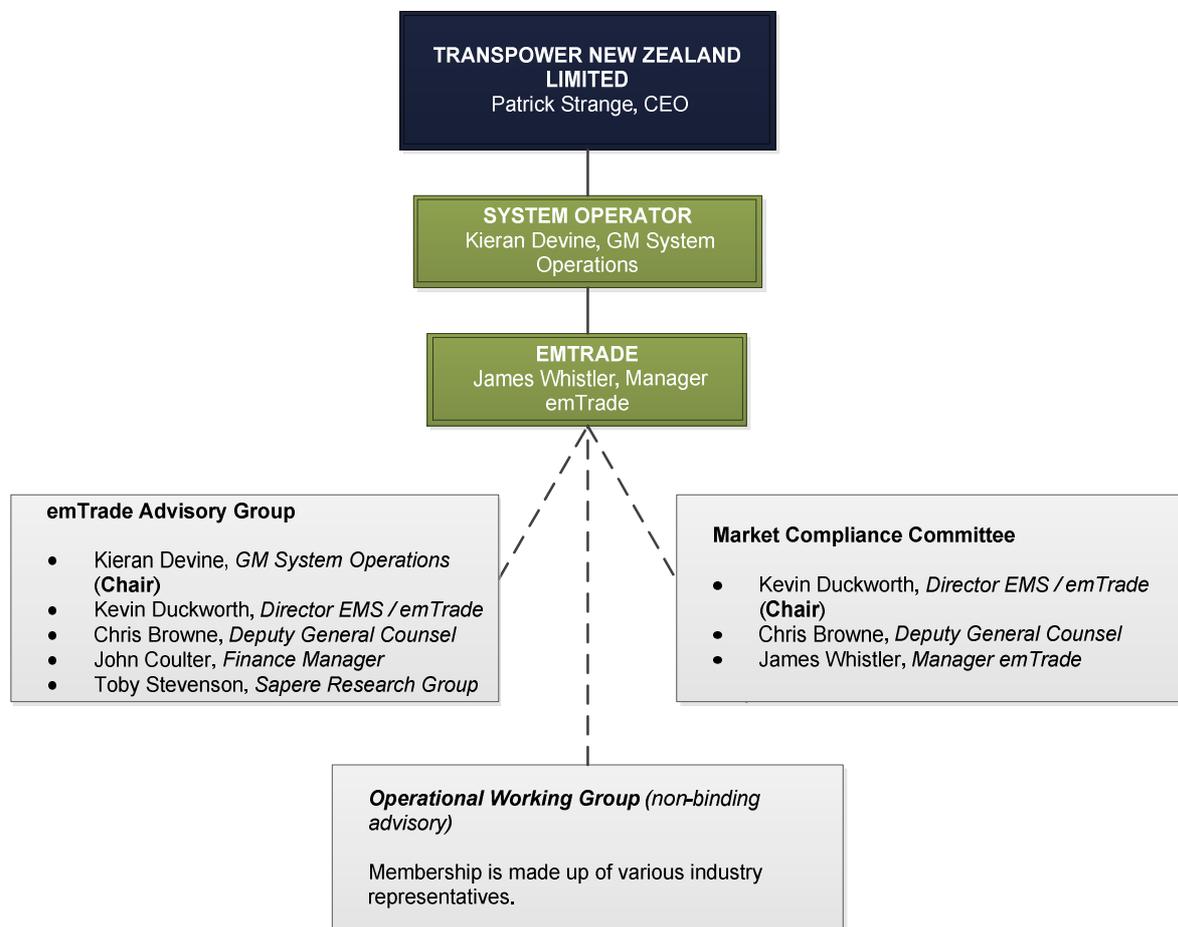
**Mark Verbiest**  
**Chairman – Board of Directors**  
Transpower New Zealand Limited  
*Signed on behalf of the Board of Directors of Transpower New Zealand Limited.*  
20 March 2014

## Section III Governance arrangements

The emTrade business and the Exchange Platform are 100% owned and operated by Transpower, and do not form a separate legal entity. emTrade is governed through the standard Transpower governance model, similar to other business units within Transpower. The emTrade Manager reports on behalf of the emTrade business to the EMS Director and GM System Operations (Transpower), who is reportable to the CEO (Transpower).

An established Advisory Group (guidance on product design, promotion and development and corporate governance), Operational Working Group (guidance on industry requirements) and Market Compliance Committee (responsible for decisions regarding market rules) provide non-binding guidance to emTrade.

The governance structure is described in the diagram below.



## Section IV Description of the emTrade Exchange Platform

### Background

emTrade is a physical commodity exchange for the energy and financial industries. Currently emTrade offers a natural gas product for physical delivery at the Frankley Road Hub on the Vector Transmission pipeline network. The development and launch of this initial product was driven by support from industry sponsors Methanex, OMV and Vector Gas Contracts. It is primarily targeted at New Zealand's gas producers, wholesalers and retailers, electricity generators, commercial and industrial users, and brokers.

### emTrade Exchange Platform

The emTrade Exchange Platform opened for live trading in November 2013. Participants can trade in two markets: On-the-Day (OTD) for same-day delivery and Day-Ahead (DA) for trading up to six months forward. The markets are open 7 days a week year-round, from 09:00 to 16:30 (NZ Time) for the OTD market and from 09:00 to 18:00 (NZ Time) for the DA market. Participants electronically submit bid or offer order instructions which are then displayed on the trading boards for the relevant delivery day. Compatible orders are automatically matched to form trades in accordance with the emTrade Market Rules.

emTrade can also accommodate 'off-exchange' trades, where Participants agree on trade terms bilaterally and submit them to emTrade for financial and physical settlement.

emTrade is the central counterparty to all trades on the Exchange Platform. A successful trade is immediately initiated into two trade legs, generating a financial and physical settlement obligation for the buyer with emTrade and for the seller with emTrade, separately. Trading on emTrade is anonymous from end-to-end, meaning parties only ever deal with emTrade as the central counterparty.

### Physical Settlement

Physical settlement takes place on the day of delivery, as per the trade terms. The seller and buyer deliver to and take away from the Frankley Road Hub independent of each other. emTrade notifies the Gas Transfer Agent<sup>2</sup> of Participants' traded quantities. Where one party fails to meet their delivery obligation, they are dealt with under the Vector Transmission Code. The gate closure for the OTD market is at 16:30 to align with the daily closing period for final nominations on the Maui pipeline.

### Financial Settlement

Participants' financial trading positions are settled monthly. Total purchases for the month are netted against total sales less trading fees to give the resulting balance owed or owing. Where appropriate, other items (such as outage refunds, annual fees or wholesale levy

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<sup>2</sup> Vector Gas Limited

payments) may be added to a Participant's statement. emTrade then issues a corresponding invoice or buyer-created tax invoice.

To facilitate the central-counterparty model, emTrade requires each bidding Participant to provide sufficient financial collateral, which can be called upon in the event of payment default.

In order to trade the Frankley Road product, Participants must have the ability to deliver or take title to gas at the Frankley Road Hub, located on the Vector SKF pipeline at the boundary where the Vector SKF and Maui pipelines meet. This is achieved via a Transmission Services Agreement with Vector. So that title can be passed, Participants must also be party to the multilateral Gas Transfer Agreement with the Gas Transfer Agent and emTrade.

### **emTrade Operations and Functionality**

emTrade operates the Exchange Platform in accordance with the Market Rules. Participant types are determined by the Participant Agreement as;

- Bidding and Offering Participant;
- Bidding Participant;
- Offering Participant; or
- View Only Participant.

Full trading (Bidding & Offering) Participants have the following abilities;

1. Place bids and offers and form trades for the Natural Gas Physical: Frankley Road (NGP:FR) product.
2. View all open orders on the trading boards.
3. View all trades and access graphs of market results.
4. Download csv data on orders and trades.
5. Manage trading permissions of users under their account.
6. Monitor exposure and settlement transactions against their collateral limit.
7. Submit off-exchange trades.

Bidding Participants and Offering Participants may do all of the above with the exception of placing offer orders and bid orders, respectively. Viewing-Only Participants have access to view all information but may not place any orders or enter into trades.

The primary channel for emTrade Participants to submit trading instructions is via the web-based Exchange Platform. For cases where a Participant is unable to access the system due to a local error, emTrade may accept requests to act on behalf of the Participant.

When submitting order instructions, the Participant may either:

1. Enter a single bid / offer directly from the trading board for the specified day of delivery. The system verifies the order is valid before asking the user to confirm submission.

2. Enter multiple bids / offers as a bulk order upload in csv format. The system checks all orders in the file are valid before asking the user to confirm submission. Where there is an error in one or more entries, the entire file is returned with the error(s) identified.

## **System Notifications**

As well as being able to monitor order status and trade history through the Exchange Platform, Participants are sent email notifications from emTrade. These include:

- Notification of a successful trade
- Delivery obligations for the next day
- Notification that an order has been placed

## **Market Data**

The emTrade Exchange Platform provides a range of data downloads for Participants, including:

- The Participant's own order data
- Data on all trades
- Graphs of market results
- Balance sheet transactions such as recent trade details

In addition, Participants are sent a Market Wrap report compiled by emTrade containing an overview of the previous week's or fortnight's trading and market commentary.

## **Risk and Control**

Effective risk management is central to the successful running of the emTrade Exchange Platform. In offering Participants the ability to manage their business risk, emTrade must provide a trustworthy exchange environment. The implementation of sound operational and system controls give Participants this certainty. In addition emTrade has functionality for Participants to set certain controls for their own internal risk management.

The main elements of risk management for emTrade include ensuring;

- proper procedures and controls are defined and followed;
- physical and financial settlement is transacted correctly;
- the Market Rules are complied with by both emTrade and Participants;
- business continuity plans are in place and are tested regularly; and
- information on trades and account balances, as provided by the system, is complete, accurate, valid, timely and appropriately restricted.

Problem management is supported by:

- recording of all system issues and remedial actions on a central database connected to the relevant internal or external parties; and
- monthly reporting on system performance and reviews of problem items.

Operational risk management is supported by:

- appropriate separation of access levels for emTrade market operators and system administrators;
- approval and validation required for operator actions and interventions on the system; and
- documented processes for all key operator tasks, which are reviewed regularly.

In designing the Exchange Platform, significant effort was placed on considering user and operator risk management. As such, there are alerts to notify users of possible erroneous orders or those which would exceed trading limits, as well as mandatory reason fields when carrying out operator intervention actions.

### **Sub-service organisations**

The Exchange Platform is supported by a number of sub-service organisations. Transpower has not included controls within this report that are the responsibility of subservice organisations. However, without sub-service organisations Transpower would not be able to meet all of the control objectives which have been deemed to be relevant for the purposes of the serviced provided to Participants of emTrade, and as such this report includes controls through which Transpower monitors material sub-service organisations to ensure their performance and controls are in line with Transpower's contractual obligations.

emTrade is primarily supported by two third-party service providers. System hosting is managed by Digiweb and system software support is provided by YouDo. emTrade holds Service Level Agreements with both Digiweb and YouDo, governing required support hours, system performance and incident response time.

Specifically, Digiweb are responsible for:

- providing and maintaining the servers on which the platform is hosted. This is done through their Christchurch data centre. In the event of a Disaster Recovery situation, first level back-up is at an alternative Christchurch location with second level back-up through their Auckland data centre;
- the environmental and physical security controls over this equipment;
- managing and maintaining the database;
- problem and incident management of the IT environment; and
- monitoring and reporting monthly on server performance and uptime.

YouDo are responsible for:

- the ongoing performance and availability of the system;
- performing patching and software updates subject to emTrade authorisation; and
- business hours support for incidents of application malfunction, data issues and system enhancements, subject to defined response times.

The change control process requires an impact analysis to be performed, testing and authorisation before any changes are released by YouDo onto the Exchange Platform test, UAT and production environments.

### **Complementary Participants controls**

The controls described in this document cover only a portion of the overall internal controls for each Participant to the extent that Transpower is responsible. Achievement of each of the control objectives as set out in pages 14 to 15 may also be dependent on controls performed by each Participant.

Internal controls, no matter how well designed and operated, can provide only reasonable, not absolute, assurance to management and Participants regarding achievement of an entity's objectives. The likelihood of achievement is affected by the limitations inherent in all internal control systems.

In addition, there are certain features of the controls that Transpower believes to be the responsibility of the Participants. Transpower expects that these controls are in place for each Participant and has considered them to be so in developing its own controls. Each Participant must evaluate their internal controls to determine if appropriate procedures are in place. Examples of internal control measures can include;

- segregation of duties from trade execution, to validation, to financial and physical settlement;
- reconciliation between trades and account balances;
- assigning appropriate access authorisations;
- user accounts monitoring and management;
- information capture for physical delivery obligations and tracking open orders (scheduling); and
- well-defined trading controls and limits aligned with business objectives.

These typical front-, middle- and back-office control practices are external to emTrade and not in the scope of this audit.



## **Independent assurance report on the description of controls and their design**

To: The Directors of Transpower New Zealand Limited

### ***Scope***

In accordance with the terms of the engagement letter dated 13 September 2012, we were engaged to report on Transpower New Zealand Limited (Transpower)'s description at pages 6 to 24 of its emTrade Platform (System) for processing user ("participant" or "market participant") transactions on the Gas Market as at 31 December 2013 (the description), and on the design of controls related to the control objectives which have been formed based on the emTrade market rules as stated in the management assertion at pages 4 and 5.

We did not perform any procedures regarding the operating effectiveness of controls included in the description and, accordingly, do not express an opinion thereon.

The description indicates that certain control objectives specified in the description can be achieved only if complementary controls contemplated in the design of Transpower's controls are suitably designed and operating effectively, along with related controls at the service organisation. We have not evaluated the suitability of the design or operating effectiveness of such complementary participant controls.

### ***Transpower's responsibilities***

Transpower is responsible for: preparing the description and accompanying assertion at pages 4 and 5, including the completeness, accuracy and method of presentation of the description and assertion; providing the services covered by the description; stating the control objectives; and designing, implementing and effectively operating controls to achieve the stated control objectives.

### ***Auditor's responsibilities***

Our responsibility is to express an opinion on Transpower's description and on the design of controls related to the control objectives stated in that description based on our procedures. We conducted our engagement in accordance with International Standard on Assurance Engagements ISAE (NZ) 3000 (*ISAE (NZ) 3000*), issued in New Zealand. That standard requires that we comply with relevant ethical requirements and plan and perform our procedures to obtain reasonable assurance about whether, in all material respects, the description is fairly presented and the controls are suitably designed.

An assurance engagement to report on the description and design of controls at a service organisation involves performing procedures to obtain evidence about the disclosures in the service organisation's description of its System and the design of controls. The procedures selected depend on our judgement, including the assessment of the risks that the description is not fairly presented, and that controls are not suitably designed. An assurance engagement of this type also includes evaluating the overall presentation of the description, the suitability of the objectives stated therein, and the suitability of the criteria specified by the service organisation and described in the service organisation assertion at pages 4 and 5.



As noted above, we did not perform any procedures regarding the operating effectiveness of controls included in the description, and accordingly, do not express an opinion thereon.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### ***Limitations of controls at a service organisation***

Transpower's description is prepared to meet the common needs of market participants and may not, therefore, include every aspect of the System that each individual participant may consider important in its own particular environment. In addition to this, because of their nature, controls at a service organisation may not prevent or detect all errors or omissions, it is possible that fraud, error or non-compliance may occur and not be detected. Further, the projection of any evaluation of effectiveness to future periods is subject to the risk that controls at a service organisation may become inadequate or fail.

### ***Conclusion***

In our opinion as at 31 December 2014 Transpower's description of the System is fairly stated and the controls are suitably designed to meet the control objectives in all material respects.

### ***Intended users and purpose of the report***

This report is intended only for participants who have used Transpower's System, who have a sufficient understanding to consider it, along with other information including information about controls operated by participants themselves, when obtaining an understanding of participants' information systems. This report does not form an audit opinion on the operating effectiveness of the controls subject to review.

A handwritten signature in black ink that reads 'PricewaterhouseCoopers' in a cursive, flowing script.

PricewaterhouseCoopers

20 March 2014  
Wellington

## Section VI Exchange Platform control objectives

### Category 1 – Security & User Administration

- Access to system privileges within the underlying operating system is adequately secured.
- emTrade functionality is only available to appropriate users at appropriate levels.
- Access to the underlying database is adequately secured.
- Adequate environmental and physical security controls are in places over computing equipment.

### Category 2 – Change Control

- Development and changes to existing systems, applications, software, and data are authorised, tested, approved, implemented and documented.

### Category 3 – Operations

- Adequate processes are in place for data recovery and continuity of business operations.
- "Next Day Delivery Obligation" notifications are complete and accurate.
- Problems and incidents are identified and resolved.
- Third party service level agreements are monitored to ensure compliance with agreed contractual requirements.

### Category 4 – Participant Administration

- Authorisation is obtained for all additions, changes and termination of participant details and agreements, supported by adequate documentation. For terminated participants, live orders are dealt with appropriately.
- Collateral limits are not exceeded and appropriate prudential assurance is in place.

### Category 5 – Fee Administration

- Fee's charged, fee refunds and tax invoices issued to participants are accurate and in line with the Market Rules.

### Category 6 – Order Administration

- Appropriate information is displayed on the Platform, supporting anonymity of participants.
- Only valid trades are settled on the Platform.
- Trades on the Platform are appropriately matched between the bid and the offer.

- Withdrawals and changes to orders are processed appropriately and in a timely manner.
- Off-exchange trades are processed completely and accurately.
- Orders processed in error are resolved appropriately.

#### **Category 7 – Governance**

- Changes to the Market Rules and affiliated documents are appropriate and approved.
- emTrade availability is communicated to market sponsors and participants periodically.
- Compliance with applicable laws and regulations is managed appropriately.

## Section VII Definition of testing terms

The following are definitions of the terms used in the testing of controls by PwC:

### I. Enquiry:

- Enquired of appropriate service organisation personnel.
- Conducted enquiries seeking relevant information or representation from personnel to obtain, among other things:
  - Knowledge, additional information and affirmation regarding the control of procedures.
  - Corroborating evidence of the controls.

### II. Inspection:

- Inspected documents and records indicating performance of the controls. This included, among other things:
  - Inspection of reconciliations and management reports that age and/or quantify reconciling items to assess whether balances and reconciling items appear to be properly monitored, controlled and resolved on a timely basis, as required by the related control.
  - Examination of source documentation and authorisations related to selected transactions processed.
  - Examination of documents or records for evidence of performance, such as the existence of initials or signatures.
  - Inspection of Transpower's systems documentation, such as operations, manuals, flow charts and job descriptions.

### III. Observation:

- Observed the application or existence of specific controls as represented.

### IV. Reperformance:

- Reperformed the control or processing application of the controls to check the accuracy of their operation. This included, among other things:
  - Obtaining evidence of the arithmetical accuracy and correct processing of transactions by performing independent calculations.
  - Reperforming the matching of various system records by independently matching the same records and comparing reconciling items to reconciliations prepared by the service organisation.

## Section VIII Control objectives and related control procedures

### INTEGRITY OF PLATFORM

#### Category 1 - Security & user administration

- Control Objective 1 - Access to system privileges within the underlying operating system is adequately secured.

Control Procedures	
a	On a monthly basis, the emTrade manager performs a review over all users who have access to the operating system by obtaining user access listings from the third party vendor.

- Control Objective 2 - emTrade functionality is only available to appropriate users at appropriate levels.

Control Procedures	
a	On a monthly basis, the emTrade manager performs a review of all internal users to ensure access is commensurate with job responsibilities.
b	On monthly basis, the emTrade manager will perform a review over a sample of changed external user accounts (including additions) to ensure appropriateness.
c	Privileged access rights in the Platform are appropriately restricted to users in line with business requirements.
d	Creation and modification of user access rights requires approval by the Company administrator or emTrade Manager.
e	User accounts are disabled when an employee leaves emTrade or when job roles change.
f	Password parameters and login settings in the application are appropriate

- Control Objective 3 - Access to the underlying database is adequately secured

Control Procedures	
a	On a monthly basis, the emTrade manager performs a review over all users who have access to the database by obtaining user access listings from the third party vendor.

- Control Objective 4 - Adequate environmental and physical security controls are in place over computing equipment.

Control Procedures	
a	emTrade ensure via contract and periodic monitoring reviews that all telehousing providers meet good practice physical security guidelines relating to air-conditioning, UPS, on-site generation and fire suppression.

### Category 2 - Change Control

- Control Objective 1 - Development and changes to existing systems, applications, software, and data are authorised, tested, approved, implemented and documented.

Control Procedures	
a	Documented change control procedures are in place that require recording of changes in a centralised repository and authorisation by multiple persons which enforces appropriate segregation of duties throughout the change management process.
b	Changes are appropriately authorised prior to development by the business owner.
c	Changes are not released into production unless they tested and approved by the Change Manager and Business Owner.

### Category 3 - Operations

- Control Objective 1 - Adequate processes are in place for data recovery and continuity of business operations.

Control Procedures	
a	Disaster recovery procedures are tested at least annually, either by a formal scheduled test or by a real switch to disaster recovery systems. Documents are then updated as required.
b	An up-to-date business continuity plan and disaster recovery plan is in place.
c	Back-up equipment (including a fully operational alternative site) and technically trained persons are available for restoration purposes.
d	Data backup and restore procedures are in place whereby daily backups are performed.

- Control Objective 2 - 'Next Day Delivery Obligation' notifications are complete and accurate.

Control Procedures	
a	'Next Day Delivery Obligation' notifications are scheduled to automatically occur on a daily basis. The System Administrator is notified when a failed attempt occurs.
b	Contents of the 'Next Day Delivery Obligation' notification is automatically populated from the emTrade Platform based on trades due to settle.

- Control Objective 3 - Problems and incidents are identified and resolved.

Control Procedures	
a	Incidents are recorded in a central register (GoToAssist) and are documented, including a description of the problem, consequences of the problem, cause of the problem and the actions taken to remedy the problem.
b	A monthly meeting is held with key third party vendors and incidents are reviewed to identify trends in recurring incidents which may require a patch or new release.

- Control Objective 4 - Third party service level agreements are monitored to ensure compliance with agreed contractual requirements.

Control Procedures	
a	An SLA is in place between third parties and emTrade for the management of the emTrade environment.
b	Third party reports are performed detailing any issues during the month and reporting against KPIs as detailed in the SLA. Issues are followed up by the emTrade manager (as required).
c	A monthly meeting is held with key third party vendors and incidents are reviewed to identify trends in recurring incidents which may require a patch or new release.

## MARKET OPERATIONS

### Category 4 - Participant Administration

- Control Objective 1 - Authorisation is obtained for all additions, changes and termination of participant details and agreements, supported by adequate documentation. For terminated participants, live orders are dealt with appropriately.

Control Procedures	
a	New participants and existing participants requiring changes must satisfy the market access criteria, have appropriate agreements and documents in place and are approved by the emTrade manager prior to commencement of trading activity. The participant and the Gas Transfer Agent are notified (as required) of the acceptance of the participant's application to participate in the market.
b	Upon acceptance of a new participant, Transpower finance is notified through a 'New Vendor' and 'New Customer' set up form.
c	The emTrade manager will review the collateral limit to ensure it is correct and in line with prudential assurance prior to commencement of trading.
d	Termination of participant agreements requires approval from the emTrade manager. Once approved, a notice of termination is issued and the Gas Transfer Agent is notified.
e	Upon termination the participant will be marked as 'inactive' within the Platform, live orders will be removed and the emTrade manager will approve release of the collateral (if applicable).

- Control Objective 2 - Collateral limits are not exceeded and appropriate prudential assurance is in place.

Control Procedures	
a	Bidding participants are supported with prudential assurance which is provided to emTrade which is in the form of a bank guarantee or any other security which has been approved by emTrade.
b	Available collateral limits in the Platform are automatically adjusted for unsettled trades and pending bids. The Platform will automatically deny any trading activity which will result in the participant organisations available collateral being breached.
c	On a monthly basis, for participants who are due to be paid, the emTrade manager will review the payment to ensure that the payment will not result in any collateral limit breaches due to timing differences in any unsettled trades.

## Category 5 - Fee Administration and Financial Reporting

- Control Objective 1 - Fee's charged, fee refunds and tax invoices issued to participants are accurate and in line with the Market Rules.

Control Procedures	
a	Invoices for fees are calculated in-line with the approved fee schedules. All invoice amounts are supported and reviewed by the emTrade manager prior to being submitted to Transpower finance for processing.
b	Annual fee refunds are calculated based on Platform outage and availability and are included in the relevant invoice for the month.
c	Invoices for payments are reviewed by the emTrade manager after they have been created.

## Category 6 - Order Administration

- Control Objective 1 - Appropriate information is displayed on the Platform, supporting anonymity of participants.

Control Procedures	
a	The Platform supports anonymity of participant organisations by restricting company specific information from being displayed on the Platform to the end-user.

- Control Objective 2 - Only valid trades are settled on the Platform

Control Procedures	
a	The emTrade Manager performs a review of orders on behalf of participants after they have been loaded onto the Platform.
b	The Platform automatically displays a warning when the bid or offer price deviates by greater than 20% of the last formed trade for the delivery day.
c	The Platform performs validation checks to ensure that users cannot trade outside the company's buy and sell permissions and the trade quantity does not exceed the maximum order quantity which is set by the company administrator.
d	Orders on behalf of participants in the case of Platform outages require verification of the requestor and approval from the emTrade manager. The participant is notified after the request has been processed.
e	The physical traded Gas quantities received from the Gas Transfer Agent are agreed to the Platform trade quantities on a weekly basis. Any discrepancies are identified and resolved.

f	Orders and withdrawals on behalf of participants require written confirmation retrospectively from the participant organisation.
g	On a monthly basis, the emTrade manager will perform a review of all formed trades with administrator intervention to assert appropriateness.
h	Privileged access rights in the Platform are appropriately restricted to users in line with business requirements.

- Control Objective 3 - Trades on the Platform are appropriately matched between the bid and the offer.

Control Procedures	
a	The Platform automatically matches orders where the sellers offer and the buyers bid are compatible. For partial fill orders, the available quantity for sale is adjusted accurately.

- Control Objective 4 - Withdrawals and changes to orders are processed appropriately and in a timely manner.

Control Procedures	
a	The Platform allows users to withdraw bids and offers to the time that successful matching occurs.
b	Orders and withdrawals on behalf of participants require written confirmation retrospectively from the participant organisation.
c	Privileged access rights in the Platform are appropriately restricted to users in line with business requirements.

- Control Objective 5 - Off-exchange trades are processed completely and accurately.

Control Procedures	
a	The emTrade Manager will perform a review of off-exchange trades after they have been loaded onto the Platform.
b	The emTrade Manager will perform an independent review of all off-exchange trades prior to the trade being loaded onto the Platform. Participant organisations will be informed via email for confirmation of their trade once it has been confirmed.
c	On a monthly basis, the emTrade manager will perform a review of all formed trades with administrator intervention to assert appropriateness.

d Privileged access rights in the Platform are appropriately restricted to users in line with business requirements.

- Control Objective 6 - Orders processed in error are resolved appropriately.

Control Procedures

a For all requests to void trades the reasons for the request are evaluated in-light of the market rules and approval will be sought from the emTrade manager. Participants are notified when the request is approved.

b Privileged access rights in the Platform are appropriately restricted to users in line with business requirements.

### Category 7 - Governance

- Control Objective 1 - Changes to the Market Rules and affiliated documents are appropriate and approved.

Control Procedures

a A formalised approval process is followed for all changes to market rules and affiliated documents. This includes preparation of an impact analysis and approval from the Market Compliance Committee.

b Market participants are informed at least one month in advance of any changes to market rules or affiliated documents.

- Control Objective 2 - emTrade availability is communicated to market sponsors and participants periodically.

Control Procedures

a A quarterly outage report is prepared and communicated to all sponsors. This report covers matters on any planned and unplanned outages during the period.

- Control Objective 3 - Compliance with applicable laws and regulations is managed appropriately.

Control Procedures

a Transpower legal and an independent third party provide ongoing advisory services to emTrade in relation to compliance with applicable laws and regulations. Considerations are regularly revisited by the Market Compliance Committee and Advisory board.

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