STTM PARTICIPANT BUILD PACK

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Version History

VERSION	DATE	AUTHOR(S)	CHANGES AND COMMENTS
1	13/02/2009	P. Kurian	Initial draft
2	18/02/2009	P. Kurian	Modified to STTM template
3	23/02/2009	P. Kurian	Modified the overall structure and changed the data types of the interface files.
4	02/03/2009	P. Kurian	Modified the document incorporating comments from Business Analysts and Work Stream Manager.
5	02/03/2009	P. Kurian	Formatting and Modifying examples
6	02/03/2009	P. Kurian	Modified the Diagrams
6A	02/03/2009	B. Poon	Final revision and formatting
6B	20/03/2009	P. Kurian	Incorporated improvements suggested in the TLG. Added regular expression for filename
7	14/04/2009	P. Kurian	Iteration 2 changes. Changes to Iteration 1 transactions – Pipeline Capacity has been renamed to Pipeline Hub Capacity and 'Comments' field has been removed from this transaction
7A	04/05/2009	B. Poon	Minor edits
7B	04/05/2009	P. Kurian	Incorporated changes suggested by Lyle Chasemore
8	11/5/2009	P. Kurian	Included changes suggested by Bas
8A	22/5/2009	P. Kurian	Included changes suggested by TLG
8B	25/5/2009	P. Kurian	Accepted changes for distribution
9	15/6/2009	P. Kurian	Modified diagrams to include Transaction Acknowledgement
9A	15/6/2009	P. Kurian	Accepted all changes for distribution
9B	23/6/2009	P. Kurian	Added changes requested by TLG – Section 2.1 and 3.12
9C	25/6/2009	P. Kurian	Moved data type to data dictionary and other minor edits. Minor edits by B. Poon.
10	26/6/2009	B. Poon	Version with changes accepted
11	13/7/2009	B. Poon	Minor edits and clarifications
11A	13/07/2009	A.Nambiar	AEMO version – updated terminology to reflect draft STTM Rules (V23), updated diagrams to reflect removal of FTPS\HTTPS requirements (now FTP\HTTP via VPN). Further corrections of examples and field descriptions. Editorial changes and changes to error descriptions. Added facilityallocationidentifier field to Registered Facility Service Allocation transaction.

VERSION	DATE	AUTHOR(S)	CHANGES AND COMMENTS
11B	16/07/2009	A.Nambiar	Removed incorrect references to Market Schedule Variation in the examples for MOS Step Allocation and Registered Facility Service Allocation, Corrected transaction times indicated in the build pack for the following transactions- Facility Hub Capacity Facility Allocation Registered Facility Service Allocation MOS Step Allocation Updated Registered Services Transaction requirements to Mandatory not Optional
	21/09/2009	P. Kurian	Deleted Error Codes 4710 and 4712
	22/09/2009	P. Kurian	Added more explanation to sections 3.3 and 4.1.13
11C	14/10/2009	P. Kurian	Updated the support of Browsers to IE 6 and IE7 and deleted Mozilla Firefox from the list of supported browsers
	20/10/2009	P. Kurian	Updated Data Dictionary to state that CommencementDate and TerminationDate are both inclusive.
	24/10/2009	P. Kurian	Modified the regular expression, Transaction and Message Acknowledgement
	27/10/2009	A.Nambiar	Updated error codes to include new validations
12	04/11/2009	A.Nambiar	Added MSV Confirmation Transaction
	07/11/2009	P. Kurian	Section 3.13 which details default transaction and acknowledgement protocol
	07/11/2009	P. Kurian	Section 3.14 details the flow control management
	07/11/2009	P. Kurian	Modified Data Dictionary to match PBP Addendum
13	16/11/2009	A.Nambiar	Removed obsolete error codes Updated MSV Confirmation Transaction
	27/11/2009	A.Nambiar	Updated facilityid list to include network facilities Updated error code descriptions Updated Data Dictionary to include MSV Confirmation Transaction references Updated eventseverity field length
	02/12/2009	P. Kurian	Added section 3.15 – Folder Structure on FTP Server
13A	04/01/2010	A.Nambiar	Updated Data Dictionary to include comments field used in Contingency Gas bids and offers Formatting changes
	11/02/2010	A.Nambiar	Update document references
13B	24/02/2010	A.Nambiar	Updated error code descriptions for errors 4702,

VERSION	DATE	AUTHOR(S)	CHANGES AND COMMENTS
			4703 for clarity
13C	09/03/2010	A.Nambiar	The reference to "reasonable endeavours" to check for the stop.txt file has been removed from section 3.13. Updated MOS Step Allocation transaction description in table 1 for clarity.
13D	19/04/2010	P. Kurian	Accepted all changes for distribution. Added error code 4643 to section 4.12 in accordance with FR5014a.
13E	07/05/2010	A.Nambiar	Updated the scope definition so that the STTM Rules and Procedures are correctly referenced.
	13/05/2010	A.Nambiar	Error code description for error 4605 updated for clarity. Added note in section 3.4 to highlight the use of .TMP extensions for files that are in transit via FTP.
	14/05/2010	A.Nambiar	Added reference to file processing order in section 3.13.
13F	25/06/2010	A.Nambiar	Editorial and formatting corrections.
13G	15/07/2010	A.Nambiar	Minor clarifications in section 3.13.
13H	27/07/2010	A.Nambiar	Updated with additional error codes for STTM Day 2 changes – CR133
13I	21/02/2011	C.Poon	Updated STTM Reports Specifications version to version 9.
13J	21/03/2011	C.Poon	Updated STTM Reports Specifications version to version 9A.
13K	28/03/2011	C.Poon	Updated STTM Reports Specifications version to version 9B.
14	14/04/2011	C.Poon	Updated Data Dictionary Updated Data Provision Added error codes: 4654, 4655, 4656, 4657, 4658, 4659, 4650, 4809, 4810, 4811, 4812 and Data Confirmation codes (4900 – 4905) Added new transaction Data Confirmation
14A	28/04/2011	C.Poon	Updated with additional error codes 4814, 4906. Updated error code 4811, 4812. Added error code 4815, 4659. Changed 4815, 4816 to 4907, 4908 respectively. Changed 4656, 4657 to 4909, 4910 respectively. Updated STTM Report Specifications version to version 10A.
14B	03/05/2011	C.Poon	Updated Supported Browsers to include IE version 8.0. Updated STTM Reports Specifications version number.

VERSION	DATE	AUTHOR(S)	CHANGES AND COMMENTS
14C	10/05/2011	C.Poon	Added 'CFM' to file naming convention.
14D	13/05/2011	C.Poon	Changed error code 4814 and 4902 description to NA.
			Moved section Data Confirmation before Message Acknowledgement.
			Updated STTM Reports Specifications version number.
15	02/06/2011	A.Nambiar	Updated with changes relating to the establishment of the Brisbane hub.
16	02/02/2012	N.Elhawary	Updated with amendments outlined in the STTM Interface Protocol Corrigenda, Issue2 to obsolete error code 4815 and issue 3 for changing description of error code 4408.
			Updated with changes related to:
			- S-16 Provide message support for Facility Operator /Participant files uploaded via SWEX CSV submission functionality.
			- Automated SWEXIE file archive
			Updated STTM Reports Specifications version number to 12.
			Added new error code 4911 as part of February2012 patch release
17	9/8/2012	A.Alizzi	QC#168 - Added clarification for CSV file row limit in section 4.1.13
			QC#178 - Added clarification note to error code 4604
18	14/12/2012	A.Alizzi	Applied changes to MSV transaction introduced by Gas Release 32 (QC#9794).
			Added disclaimer page to the document.
19	4/10/2013	L.Chasemore A.Alizzi	Added MOS Offer transaction.
			Updated interface diagrams and descriptions in Section 3
	10/04/2014	C.Poon	Updated the format of mosperiod for the MOS Offer transaction.
	30/04/2014	C.Poon	QC#4322 - added a note for error code 4659 which will be fixed in Gas Release 35.
			QC#4086 and QC#4119 - added a note about SWEXIE accepting transactions with additional fields to the Error Codes section.
20	9/08/2016	A.Alizzi	Noted the new SWEX Only transaction for 'Contingency Gas Bid & Offer Confirmation' in Sections 2 & 3.

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1 INTRODUCTION

Purpose

The purpose of this document is to specify the data formats and the rules of data exchange between AEMO and STTM Market Participants in the context of the Short Term Trading Market (STTM).

Audience

The primary audience for this document are business users and IT developers of the Market Participants, and AEMO business users and IT developers involved in the design and implementation of STTM.

This document assumes that the audience has a basic understanding of Unified Modelling Language (UML) including UML concepts and syntax.

Scope

This document describes and defines all of the B2M transactions supported by AEMO STTM systems. The transaction methods, protocols and file formats are documented as agreed by the Technical Liaison Group (TLG) on the 11th of February 2009.

This version of the document incorporates all approved market design elements and is thus the version that is 'complete'. It also incorporates all approved changes up to 1/12/2011.

Note that it is not within the scope of this document to list and describe all the obligations STTM participants have to provide data to AEMO. The STTM Rules and Procedure remain the definitive source of those obligations.

Related Documents

Ref.	Document Name	Ver.	ShareDocs	Comments
1	W3C Recommendation eXtensible Markup Language (XML)	1.0	N/A	2nd edition, W3C 6/10/1998 http://www.w3c.org
2	STTM Rules	TBD	NA	Market Start Version
3	STTM Procedures	TBD	NA	Market Start Version
4	STTM Interface Protocol	TBD	NA	Market Start Version
5	STTM Reports Specifications	15	ShareDocs_STTMReportsSpec	

Exclusions

The business validations applied to each transaction has been excluded from this document. They are covered separately in the STTM Participant Build Pack Business Validations Addendum (Doc Ref:291385) made available to the participants.

Definitions, Acronyms and Abbreviations

Term	Description
AEST	Australian Eastern Standard Time
ASCII	American Standard Code for Information Interchange. A standard coding scheme that assigns numeric values to letters, numbers, punctuation marks, and control characters, to achieve compatibility among different computers and peripherals
CSV	Comma-Separated Values, a comma delimited text
D-1	In reference to a gas day D, the (calendar unless otherwise specified) day before that gas day.
D+1	In reference to a gas day D, the (calendar unless otherwise specified) day after that gas day.
GJ	1000 Mega Joules, 10^9 Joules, Joule is a unit of energy
M	Mandatory, in the context of this document, indicates that the field's value must be provided
MIS	Market Information System
MOS	Market Operator Service
TRN	Trading Right Number
CRN	Contract Registration Number (Identifies Registered Facility or Distribution Services)
NR	Not required, in the context of this document, indicates that the value will be ignored by the parsing application even if it is provided
O	Optional, in the context of this document, indicates that a field's value need not be provided, but will be processed if provided
SIP	STTM Interface Protocol
STTM	Short Term Trading Market
UML	Unified Modelling Language
S-WEX	This is the STTM – Web Exchanger, an AEMO application that allows STTM Participants to submit information to AEMO.
FTP	File Transfer Protocol (FTP) is a standard network protocol used to exchange and manipulate files over an Internet Protocol computer network, such as the Internet
HTTP	Hyper Text Transfer Protocol –The internet protocol used for information exchange between web clients and web servers.
HTTPS	Hyper Text Transfer Protocol Secure-The internet protocol used for information exchange between web clients and web servers. It is a combination of the Hypertext Transfer Protocol with the SSL/TLS protocol to provide encryption and secure identification of the server
VPN	Virtual Private Network – A virtual (private) network that can be used to securely connect computers physically connected to a larger (public) network

Overview and Structure

This document comprises the following sections:

- Introduction – outlines the purpose of this Participant Build Pack, the intended audience, and scope.
- Rules and Procedures – details the rules and procedures relevant to STTM.

- Interfaces – provides overview information about interfacing with STTM systems.
- Transactions – contains the general requirements and external interface specifications for the Short Term Trading Market.

2 RULES AND PROCEDURES

This document details STTM interface requirements (between the Market Participants and AEMO) as required by the Market Rules (still under development). If the final Market Rules require a change to this table, AEMO will make the necessary changes and re-issue the document.

Data Provision

The following matrix details the data provision responsibilities of all parties as defined in the Rules.

Transaction / Participant	Frequency	Shipper	STTM Pipeline Operator	STTM Distributor	Allocation Agent	AEMO	User	Cutoff Times[1]
Ex Ante Bids	A	⊙					⊙	Gas day Start + 5:30 Hours D-1
Ex Ante Offers	A	⊙						Gas day Start + 5:30 Hours D-1
Contingency Bids	A	⊙					⊙	6:00pm D-1
Contingency Offers	A	⊙					⊙	6:00pm D-1
MOS Offers	A	⊙					⊙	5:00PM MPSD – X gas days where MPSD = MOS Period Start Date and X = no. of cut-off gas days for MOS Period Type
Price Taker Bids	A						⊙	Gas day Start + 5:30 Hours D-1
Facility Hub Capacity	D		●					First cutoff time: Gas day Start + 3:00 Hours D-1 Second cutoff time: Gas day Start + 4:30 Hours D+1
Facility Allocation	D		●		●			First cutoff time: Gas day Start + 4:30 Hours D+1 Second cutoff time: Gas day Start + 8:30 Hours D+1
Deemed STTM Distribution System Allocation	D		●		●			Gas day Start + 4:30 Hours D+1
Pipeline CTM Data	D		●					Gas day Start + 3:30 Hours D+1
Registered Facility Service Allocation	D			●	●			Gas day Start + 4:30 Hours D+1
MOS Step Allocation	D				●			Gas day Start + 4:30 Hours D+1
Market Schedule Variation Submission	A	⊙					⊙	5:00pm D+7
Registered Service Registration[2]	A	⊙					⊙	Gas day Start + 5:30 Hours D-1
Registered Service Confirmation[2]	A		●	●				Gas day Start + 5:30 Hours D-1
Trading Right	A	⊙					⊙	Gas day Start + 5:30 Hours D-1

[2] These transactions are submitted using SWEX user interface only and therefore, not included in section 4 of this document.

Participant / Transaction	Frequency	Shipper	STTM Pipeline Operator	STTM Distributor	Allocation Agent	AEMO	User	Cutoff Times[1]
Creation[2]								
Market Schedule Variation Confirmation	A	◉					◉	5:00pm D+7
Data Confirmation	A		●		●			For facility hub capacity: First cutoff time: Gas day Start + 3:00 Hours D-1 Second cutoff time: Gas day Start + 4:30 Hours D+1 For facility allocation: First cutoff time: Gas day Start + 4:30 Hours D+1 Second cutoff time: Gas day Start + 8:30 Hours D+1
Contingency Gas Bid & Offer Confirmation[2]	A	●					●	As directed by AEMO during a CG event

Legend

● Obligation under the Rules to provide data to AEMO

◉ Data provision optional, not mandatory

D Data to be provided **D**aily

A Data to be provided when **A**pplicable

Inconsistencies

Where inconsistencies exist between this document and the Rules or Procedures, then the requirements or definitions as defined in the Rules or Procedures shall take precedence.

3 INTERFACES

Overview

Provision of information and data required for STTM is mandatory under the Market Rules (to be defined) and is specified in detail in the Procedures (to be defined).

In order to provide maximum flexibility within the scope of what has been agreed in the TLG meeting on 11 Feb 2008, the following four different interfaces have been provided to submit information from and to AEMO:

1) Direct data entry using a browser
2) Data loading using CSV file to browser
3) CSV file upload using FTP
4) CSV file upload using HTTPS

The structure of the CSV file for upload using options 2, 3 or 4 shall remain the same. An overview of different options available for submitting information to AEMO is given below:

Transaction	Direct data entry using the S-WEX web application	Data Loading using CSV file to upload via the S-WEX web application	CSV file upload using FTP	CSV file upload using HTTPS
Ex Ante Bids and Offers submission	Yes	Yes	Yes	Yes
Price Taker Bids submission	Yes	Yes	Yes	Yes
Contingency Gas Bids and Offers submission	Yes	Yes	Yes	Yes
MOS Offers submission	Yes	Yes	Yes	Yes
Market Schedule Variation Submission	Yes	Yes	Yes	Yes
Market Schedule Variation Confirmation	Yes	Yes	Yes	Yes
Facility Hub Capacity submission			Yes	Yes
MOS Step Allocation submission			Yes	Yes
Facility Allocation submission			Yes	Yes
Deemed STTM Distribution System Allocation			Yes	Yes
Pipeline CTM Data			Yes	Yes
Registered Facility Service Allocation submission			Yes	Yes
Contract Registration	Yes			
Contract Confirmation	Yes			
Trading Right Creation	Yes			
Data Confirmation			Yes	Yes
Contingency Gas Bid & Offer Confirmation	Yes			

Option 1 – Direct data entry using browser

Direct data entry is provided for transactions that are time critical. This way the user is informed of the success and failure of these transactions almost instantly.

The following transactions can be submitted in this mode:

- Ex Ante Bids and Offers
- Price Taker Bids
- Contingency Gas Bids and Offers
- Market Schedule Variation Submission
- Market Schedule Variation Confirmation
- Contract Registration
- Contract Confirmation
- Trading Right Creation
- MOS Offers
- Contingency Gas Bid & Offer Confirmation

Refer to the STTM Web Exchanger User Guide for further details on direct data entry using the browser available at:

http://www.aemo.com.au/Gas/Policies-and-Procedures/Short-Term-Trading-Markets/Rules-Procedures-and-Interface-Protocol
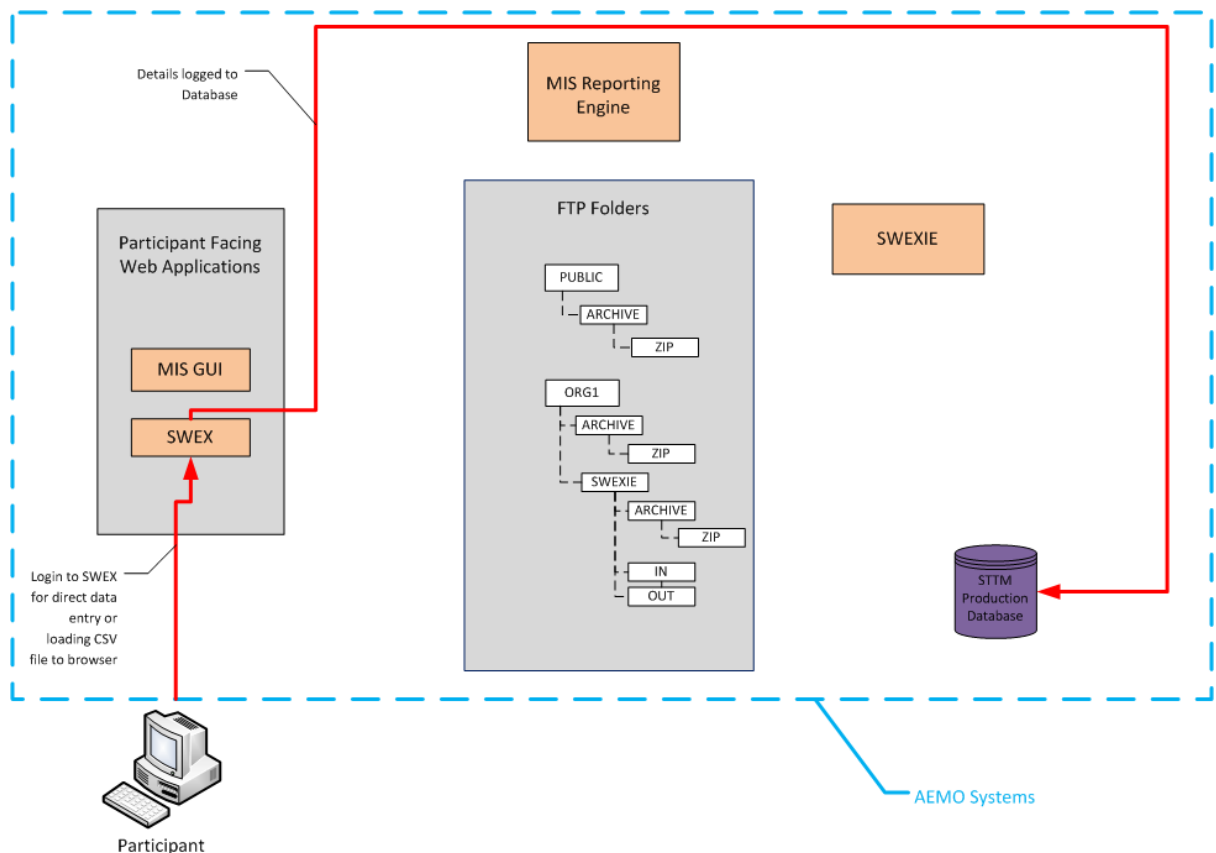
Figure 1. Data entry using options 1 and 2

Option 2 – Data loading using CSV file to browser

A CSV file upload facility is provided as an alternative method to directly typing the data in the browser based user interface. This feature is currently available for time critical transactions. This way the user is informed of the success and failure of these transactions almost instantly.

Information presented on the screen may be changed manually and the user will be presented with the modified information for confirmation before saving to AEMO systems for further processing.

The intention of this mode of submission is to provide the user with a more user friendly interface with some initial validations done before displaying the data to the user. This is intentionally done this way since the user has another opportunity to confirm the submission. Once confirmed, the data will be validated analogous to the data submitted using options 3.2, 3.4 or 3.5.

The following transactions can be submitted in this mode:

- Ex Ante Bids and Offers
- Contingency Bids and Offers
- Price Taker Bids
- Market Schedule Variation
- MOS Offers

The process for uploading CSV files includes the following steps:

- A Market Participant prepares a data file utilising any available third-party tools, for example Microsoft® Excel[3], or any text editor.

- Each file can only contain only one of the following options:
  - A single Bid, or a single Offer
  - A single Contingency Bid, or a single Contingency Offer
  - A single Price Taker Bid
  - Market Schedule Variation
  - A single MOS Offer

- The Market Participant selects the upload file function from the appropriate screen in S-WEX, which results in a "file open" dialogue presented to the participant.

- After the required file is located and selected, S-WEX will upload the file and validate the format of the data stored in the file, as defined in this document. Note, at this point, there will be no business validation of the data. The first format error detected will be returned to the participant via an error dialogue. The Market Participant can rectify the error off-line and attempt to upload the file again.

- If S-WEX determines the uploaded data format is valid, it will display an appropriate screen with uploaded data populated into that screen.

- The Market Participant will be able to modify the data presented on the screen, and then submit the data for scheduling by pressing the "Submit" button.

- S-WEX will validate the submitted data in the same way as for manually entered data. Any error found will be reported back to the Market Participant. Upon successful submission, the Market Participant will be given a confirmation identifier for auditing and tracking purposes.

Refer to the STTM Web Exchanger User Guide for further details on loading data into the browser using a CSV file available at:

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[3] When a text file with .CSV extension is opened in Microsoft Excel, Excel changes the date format to DD-MM-YY, that would make it incompatible with the date format specification as defined in this document, i.e. YYYY-MM-DD.

http://www.aemo.com.au/Gas/Policies-and-Procedures/Short-Term-Trading-Markets/Rules-Procedures-and-Interface-Protocol

A high-level sequence diagram is shown in Figure 2. File upload overview sequence diagram which illustrates the process of uploading a data file into S-WEX.
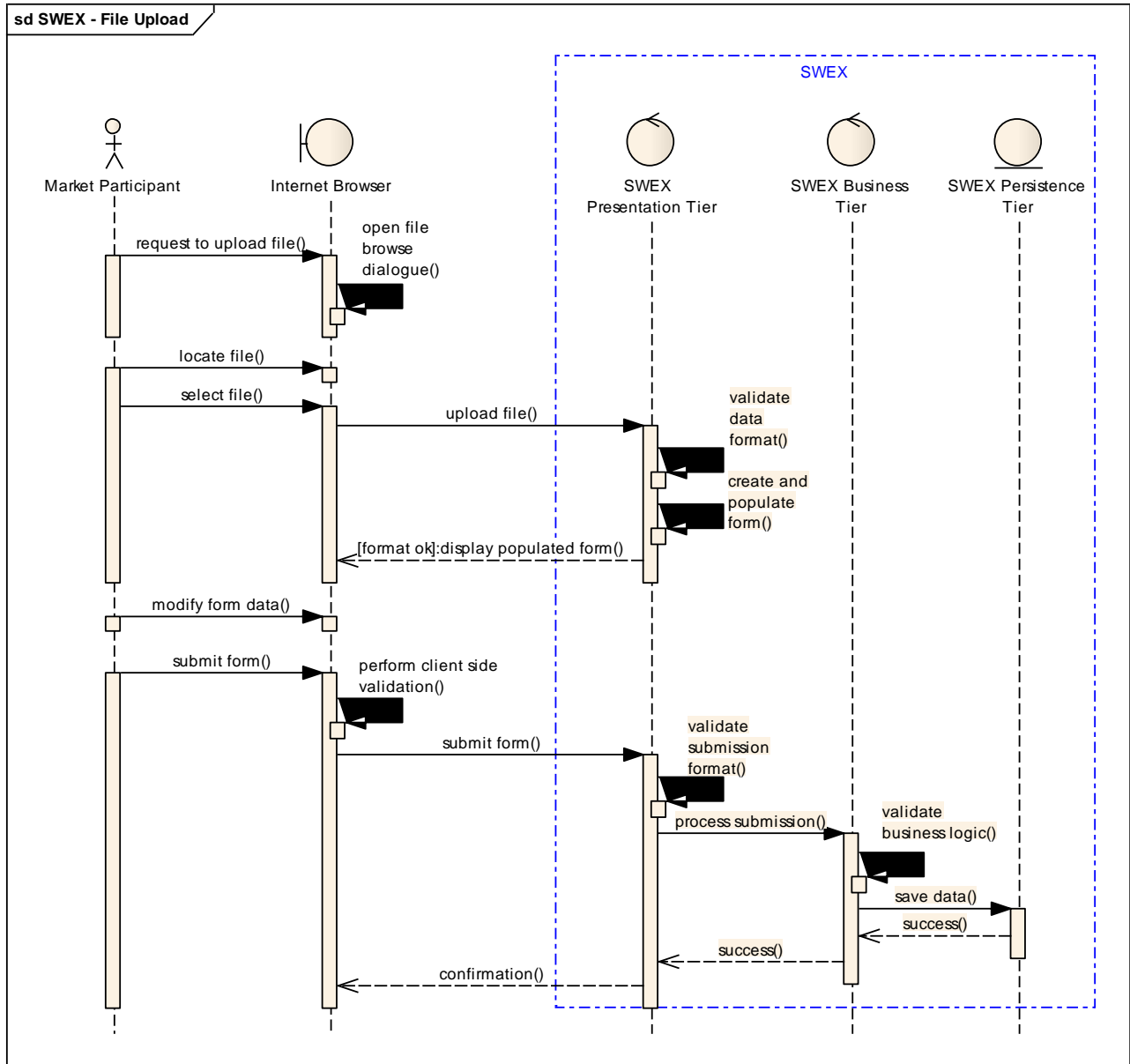
Figure 2. File upload overview sequence diagram

Option 3 – CSV file upload using FTP

This method is envisaged as the most common mode of data exchange between AEMO and Participants and operates in an asynchronous transactional mode. This method uses FTP as the network protocol and each transaction will be provided with a message acknowledgement and a transaction acknowledgement. This method supports all transaction types in STTM except Contracts & Trading Right Registration and Contract and Market Schedule Variation Confirmation. The VPN connection ensures that the data transfer in STTM done over the Internet is secure.

The following transactions may be submitted using this method:

- Ex Ante Bid and Offer

- Contingency Bid and Offer

- Price Taker Bid

- Facility Hub Capacity

- Facility Allocation

- Deemed STTM Distribution System Allocation

- Pipeline CTM Data

- Registered Facility Service Allocation

- MOS Step Allocation

- Market Schedule Variation Submission

- Market Schedule Variation Confirmation

- Data Confirmation

- MOS Offer

Participants upload the CSV file to their S-WEX Interface Engine 'IN' folder (shown in Figure 4. CSV upload using options 3 and 4). An acknowledgement is written to the 'OUT' folder of the participant after basic validation and business validations are performed before writing a transaction acknowledgement.

Note that the files must be uploaded with a TMP extension. Only on completion of the file transfer must the TMP extension be changed to CSV. This prevents the STTM file processing engine from processing incomplete files that are in transit.

The following sequence diagram shows the basic process:

sd Participant Data Upload

alt HTTP file via web browser

Participant → MIS Client: select upload file function()

MIS Client → Participant: show file open dialogue()

Participant → Participant: select file()

Participant → MIS Client: submit file()

MIS Client → MIS Web\FTP Server: upload file (with tmp ext)

MIS Client → MIS Web\FTP Server: rename file (with csv ext)

alt FTP file upload

Participant → MIS Web\FTP Server: upload file (with tmp ext)

Participant → MIS Web\FTP Server: rename file (with csv ext)

seq process file

FileManager → MIS Web\FTP Server: poll for files()

FileManager → FileManager: copy file()

FileManager → FileManager: perform basic validation()

FileManager → MIS Persistance Tier: [format error]: write to error log()

FileManager → MIS Web\FTP Server: write NACK (with tmp ext)

FileManager → MIS Web\FTP Server: rename file (with csv ext)

FileManager → MIS Persistance Tier: [format ok]: write to interface db()

FileManager → MIS Web\FTP Server: write ACK (with tmp ext)

FileManager → MIS Web\FTP Server: rename file (with csv ext)

FileManager → MIS Persistance Tier: poll for pending job()

FileManager → FileManager: parse file()

FileManager → FileManager: validate data()

FileManager → MIS Persistance Tier: write raw data()

FileManager → MIS Persistance Tier: [alarms]:write alarms()

FileManager → MIS Web\FTP Server: [alarms]:write response with events (with tmp ext)

FileManager → MIS Web\FTP Server: rename file (with tmp ext)

FileManager → MIS Persistance Tier: [No fatal alarms]:write data to final destination()

FileManager → MIS Web\FTP Server: [No alarms]:write response without events (with tmp ext)

FileManager → MIS Web\FTP Server: rename file (with csv ext)

Figure 3. File upload process – Sequence Diagram

Option 4 – CSV file upload using HTTPS

This method behaves exactly the same as Option 3 except for the fact that the network protocol is HTTPS.

Once S-WEXIE has completed file validation, S-WEX will load the transaction summary table with the submission acknowledgements (accept/rejection/warning) at MCK/ACK level. The Participant can view error and warning details by clicking on the icon next to the submission within the transaction summary table. Refer to the STTM Web Exchanger User Guide for further details.
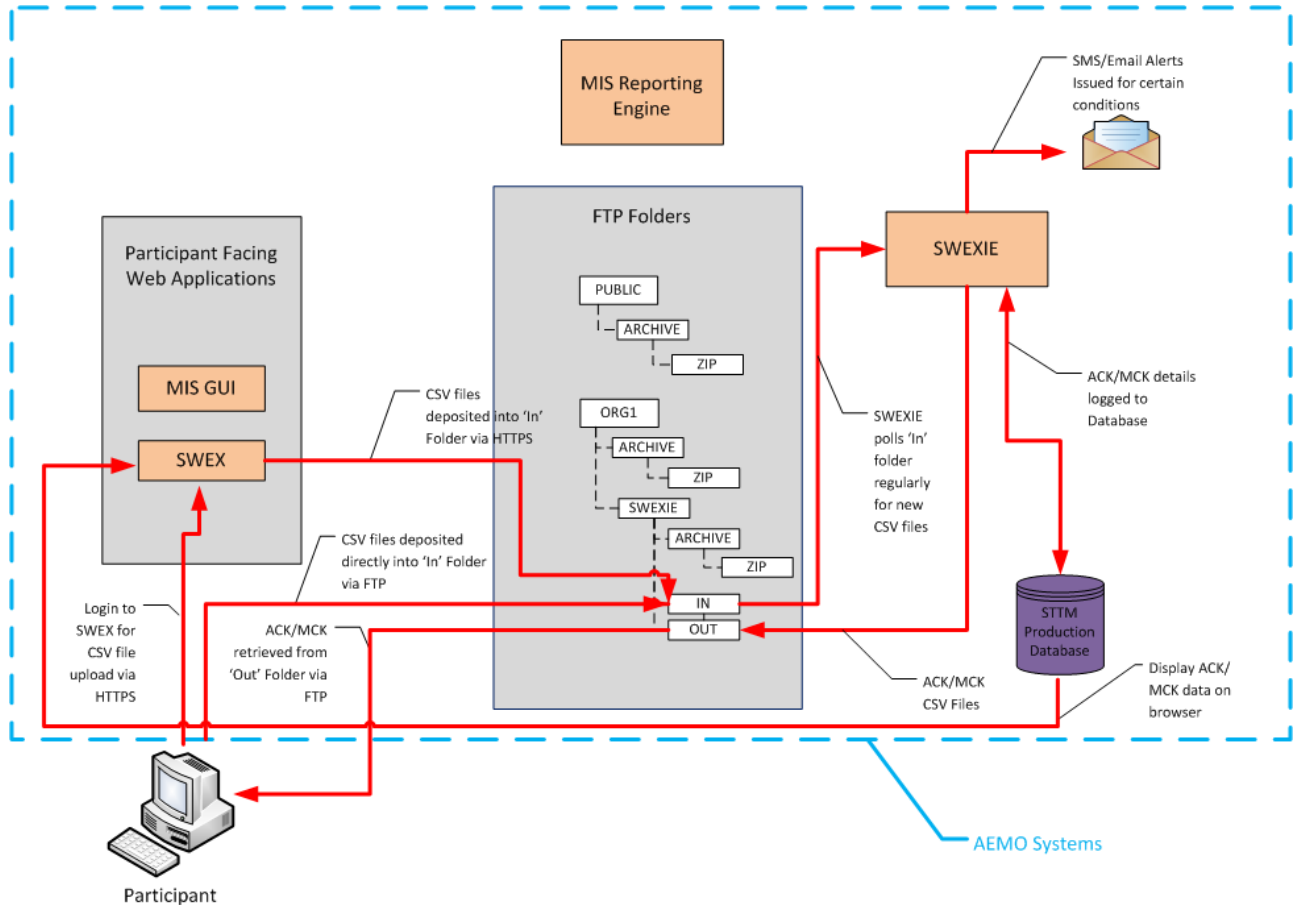
Figure 4. CSV upload using options 3 and 4

Transaction processing using S-WEXIE

S-WEXIE is the designated engine that will be processing all incoming CSV files and this is diagrammatically represented below:
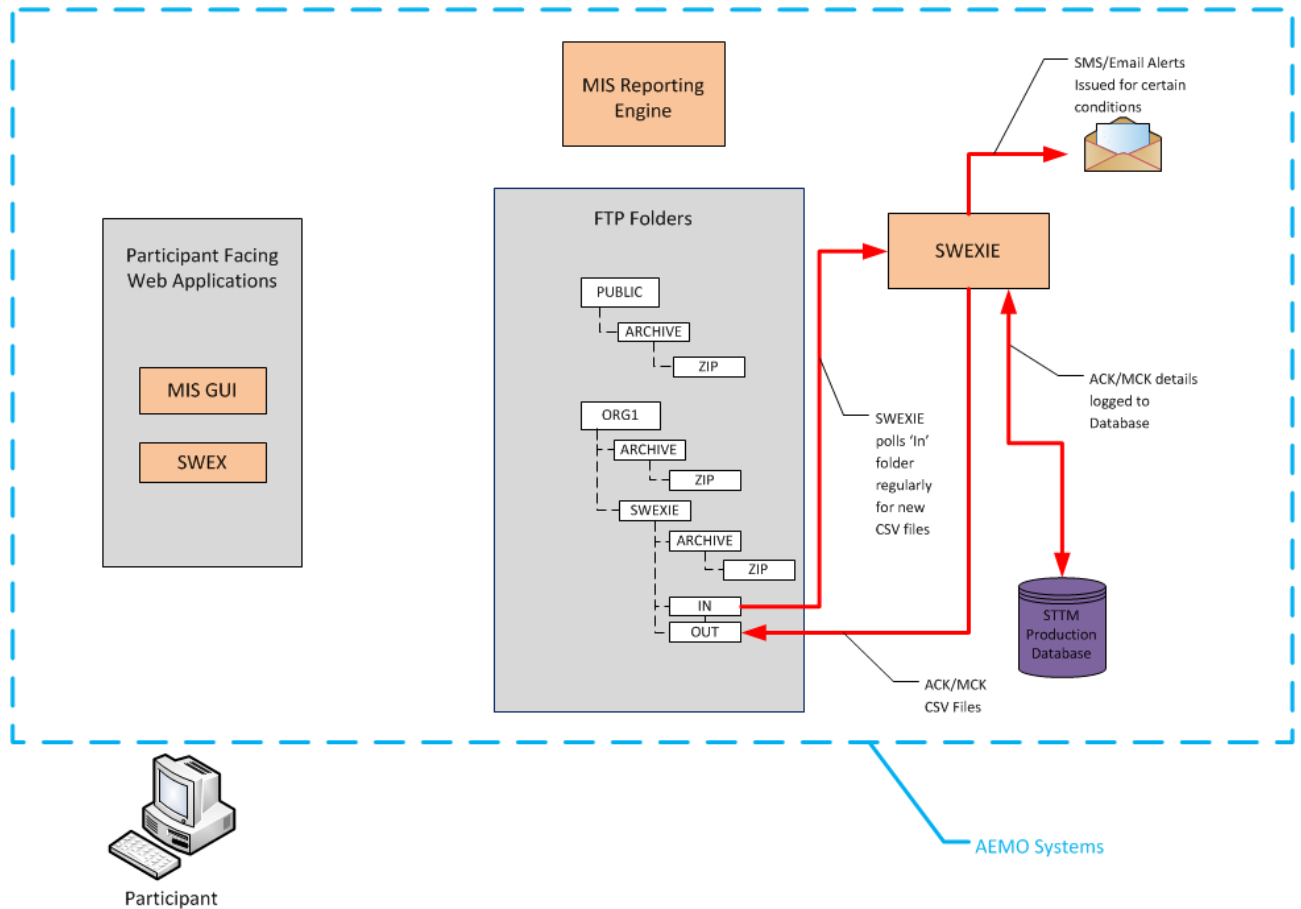
Figure 5. CSV transaction and acknowledgement processing by S-WEXIE

Overview of STTM Interfaces
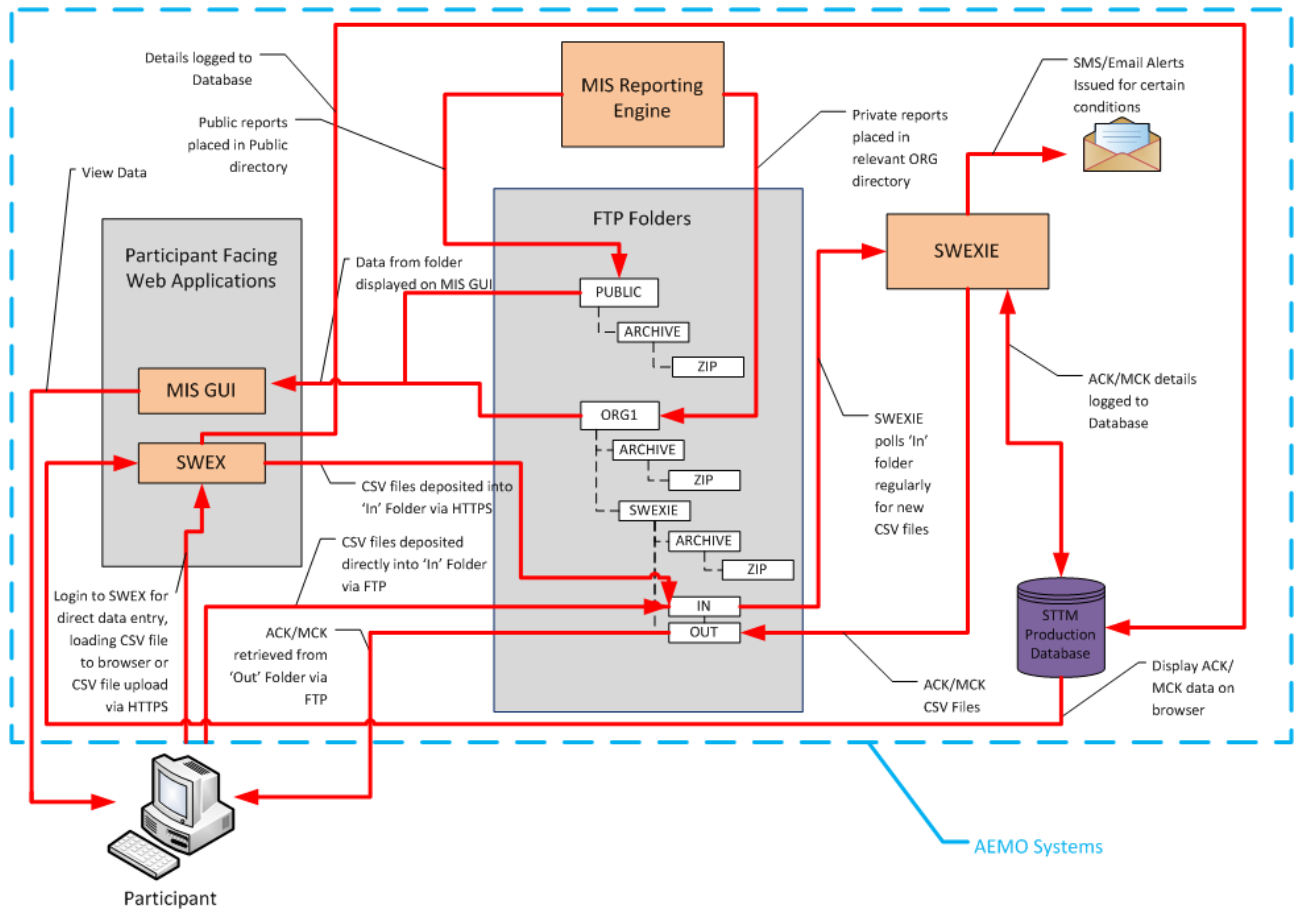
Figure 6. Overview of STTM Interfaces

Supported Browsers

AEMO supports Internet Explorer (IE) and the application will be tested with IE (v6.0, 7.0 and 8.0). Other publicly available browsers would probably work but will be unsupported.

Transactions

As outlined in the diagrams above, the STTM transactions listed in section 2.1 of this document fall into two categories:

- Transactions based on participant submissions via the S-WEX web application.

- Transactions based on the exchange of standardised CSV files via the S-WEX interface engine.

The technical details of the CSV based transactions that are handled by the S-WEX interface engine are detailed in section 4. The following table provides a brief description of the information contained within those transactions. Further information on the data described below may be found in the STTM Rules and Procedures:

Table 1 Transaction Description

Transaction Name	Description
Ex Ante Bid	A bid submitted by an STTM Shipper or STTM User for a hub in accordance with STTM market rules to withdraw quantities of natural gas from that hub on a gas day at a specified price or prices.
Ex Ante Offer	An offer submitted by an STTM Shipper for a hub in accordance with STTM market rules to deliver quantities of natural gas to that hub on a gas day.
Contingency Bid	A bid submitted by a Trading Participant in accordance with STTM market rules to provide contingency gas by decreasing the quantity of natural gas delivered to a hub, or increasing the quantity of natural gas withdrawn from a hub, on a gas day.
Contingency Offer	An offer submitted by a Trading Participant in accordance with STTM market rules to provide contingency gas by increasing the quantity of natural gas delivered to a hub, or decreasing the quantity of natural gas withdrawn from a hub, on a gas day.
MOS Offer	An offer, submitted by a Shipper in accordance with STTM market rules, to provide gas to be supplied to the hub in excess of the scheduled quantity (Increase MOS Offer), or to provide for gas to be absorbed from the quantity scheduled to be delivered that is otherwise not required to meet withdrawals from the hub (Decrease MOS Offer)
Price Taker Bid	A bid submitted by an STTM User for a hub in accordance with STTM market rules to withdraw quantities of natural gas from that hub on a gas day at the ex ante market price that applies on that gas day.
Facility Hub Capacity	The quantity of natural gas which an STTM Pipeline Operator expects, in good faith, that the STTM facility will be able to deliver to the relevant hub on a gas day.
Facility Allocation	The total quantity of natural gas that is taken to be delivered to or withdrawn from the relevant hub on a gas day using that registered facility service in accordance with the STTM market rules.
Deemed STTM Distribution System Allocation	The quantity of natural gas that is taken to be withdrawn by STTM Users from Deemed STTM Distribution Systems on the relevant hub on a gas day in accordance with the STTM market rules and procedures.
Pipeline CTM Data	The total quantity of natural gas deemed by pipeline operators to have been delivered to each custody transfer point where natural gas passes to an STTM distribution system that is not a deemed STTM distribution system for a gas day in accordance with the STTM market rules and procedures.
Registered Facility Service Allocation	The quantity of natural gas that is taken to be delivered to or withdrawn from the hub by the trading right holder on a gas day using the registered facility service to which the trading right relates.
MOS Step Allocation	The quantity of natural gas allocated by an STTM Pipeline Operator to a MOS provider based on an Increase Stack (in relation to an increase in the quantity of natural gas delivered) and a Decrease Stack (in relation to a decrease in the quantity of natural gas delivered).
Market Schedule Variation Submission	A notification by a *shipper or user* to *AEMO*, submitted to modify their market schedule used in settlement for a hub for a gas day in accordance with STTM market rules.
Market Schedule Variation Confirmation	A notification by a *shipper or user* who is a counter party to a submitted Market Schedule Variation to *AEMO,* submitted to confirm their acceptance of the submitted Market Schedule Variation in accordance with STTM market rules.
Data Confirmation	A notification by a Facility Operator who is a submitter to a received transaction to *AEMO,* submitted to confirm their acceptance of the received transaction in accordance with STTM market rules.

Timing Requirements

Each STTM transaction is assigned a priority by the STTM interfaces. The priority dictates how the AEMO systems process the transactions. High priority transactions will be processed before lower priority transactions. The acknowledgement timings for each priority level are provided below for reference:

Table 2 Timing Requirements

Cycle	Low Priority Transactions	Medium Priority Transactions	High Priority Transactions	Responsibility
Message Acknowledgement	30 minutes	15 minutes	1 minute	AEMO
Transaction Acknowledgement	120 minutes	60 minutes	5 minutes	AEMO

Cutoff time for inclusion in Schedule or Settlement

ReceiptDateTime element in Transaction Acknowledgement specifies the actual time this transaction has finally been committed to AEMO backend systems and shall be the time used to determine whether or not a transaction has met appropriate data submission deadlines.

Authentication Requirements

Connections to all externally facing applications will use 2-factor authentication; one to the network and the other to the application. Existing AEMO access mechanisms are proposed for the STTM. This provides:

- Network VPN from participant networks
- Client VPN from participant workstations
- Client access via browser using HTTPS (via VPN)

Once connected to the network, user name and password will be required to authenticate against the application domain.

Default File Transfer and Acknowledgement Protocol

Figure 7. Default File Transfer and Acknowledgement Protocol (sequence diagram) details the file transfer and acknowledgement protocol implemented by AEMO Gateway Service and STTM Web Exchanger Interface Engine (SWEXIE) application. The Initiator may –i.e. this is optional- check whether the Market Operator has requested a stop on delivery of transactions as detailed in section 3.14.

The STTM systems will periodically process received files in a participant's **in** folder. If there are multiple files in the folder, the files will be processed in order of transaction priority and where the priorities are the same, in chronological order with earlier submissions processed first based on the date time stamp in the file name of the submitted file.

The steps followed in a normal processing scenario, from the perspective of the Initiator, are as follows (where the step numbers equate to the steps in the sequence diagram):

1. Initiator checks that the AEMO has not posted "stop.txt" in the in folder of the participant – note that this is an optional step. Participant puts a file in the **in** folder
2. AEMO Gateway Service picks up the file
3. Gateway Service performs filename validation
4. Gateway Service posts message acknowledgement to **out** folder of the initiator
5. Gateway Service moves the file to the **out** folder of AEMO
6. AEMO file processor (SWEXIE) picks up the file
7. SWEXIE performs business validation
8. SWEXIE writes transaction acknowledgement to AEMO **in** folder
9. Gateway Service pick up the file and moves it to Participant **out** box

Market Participant polls for posted message acknowledgement and the transaction acknowledgement, downloads it from the **out** folder and deletes the downloaded file. Once the file is cleared from the **out** folder, AEMO knows that the participant received the acknowledgement. This is an asynchronous process and has no bearing on AEMO's message processing.
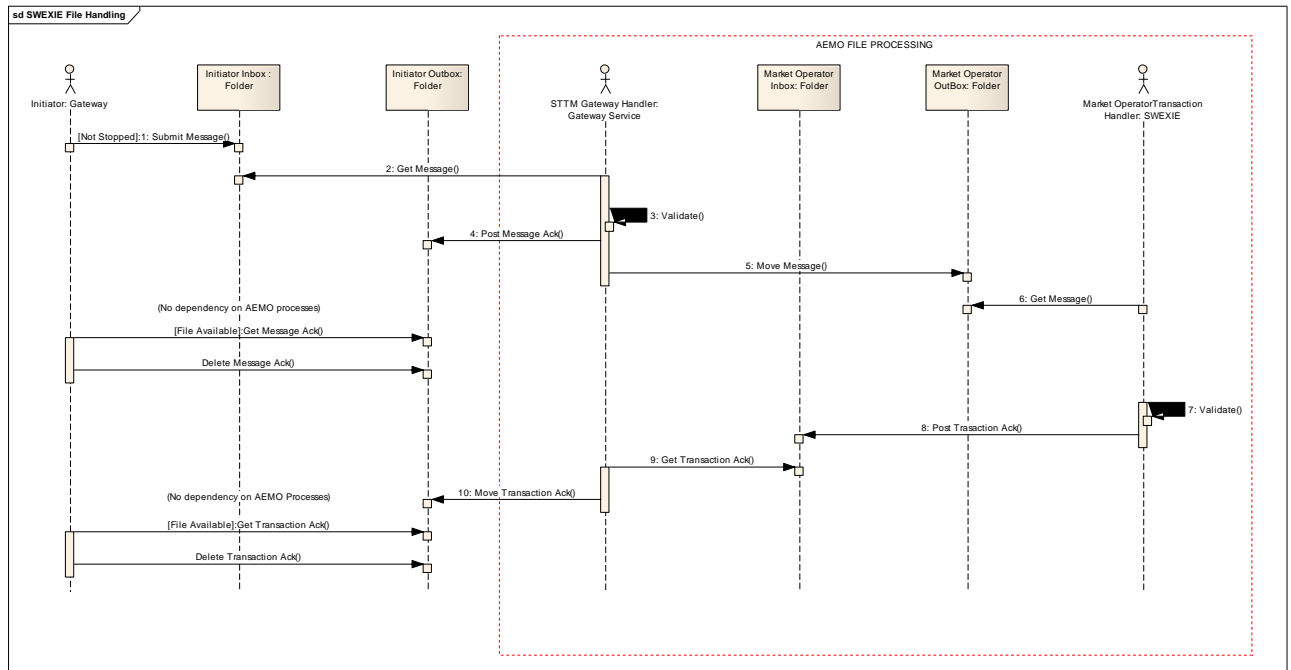
Figure 7. Default File Transfer and Acknowledgement Protocol

SWEXIE Flow Control Management

Gateway Service provides the following flow control management functionality. This functionality is a protection mechanism against file overloading of Market Operator's Outbox. This is managed by posting a 'stop.txt' in the in folder of the Market Participant. Gateway Service will not process files from any folder that has 'stop.txt' posted in it.

Folder Structure on FTP Server

STTM requires Market Participants to retrieve and submit data to AEMO for the functioning of the market. Several mechanisms have been described in the Participant Build Pack and Reports Specifications document and one of them is FTP. STTM runs an FTP server within IIS and each participant is provided with a folder where they deposit files to and retrieve files from. Access to these folders has been controlled by permissions to these folders.

The folders are named according to the scheme ORGnnn for the report directory name where the nnn is the Company_Id of that organisation in the AEMO Organisation Register Global (ORG) application. This will make it easier to maintain the application in the event of organisations changing their names due to acquisition or merger.

The folder structure for the FTP site is set up as shown below:
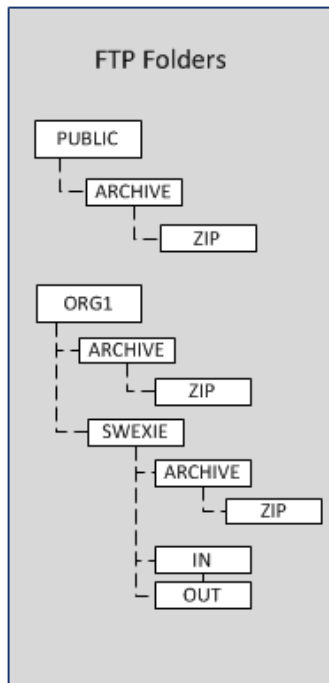
Participants are allowed read, write access to the 'in' folder and read, delete access to the 'out' folder. Participants do not have access to ..\SWEXIE\archive or to ..\SWEXIE\archive\zip which are purely for AEMO maintenance tasks.

4   TRANSACTIONS AND ACKNOWLEDGEMENTS

General Requirements

4.1.1 File format

Any uploaded file must be in 7-bit ASCII format. Non-printable characters should not be used. Unicode formats should not be used.

4.1.2 Line delimiters

Lines in the uploaded file should be delimited by a combination of Carriage Return (CR, ASCII code decimal 13) and Line Feed characters (LF, ASCII code decimal 10). This combination is chosen to cater for the "lowest common denominator" in producing CSV files, the Microsoft® Excel™ application that uses this behaviour as default.

4.1.3 Field delimiters

Fields in a row must be delimited by commas (ASCII code decimal 44).

The last field in the row must be followed by a line delimiter (CR+LF) except for the last line in a file.

4.1.4 Optional fields

If a field is declared as optional its value needs not to be specified, however the field delimiter must be present.

4.1.5 Treatment of literals

The CSV import application will be able to parse literals irrespective of whether they are surrounded by double-quotes, single-quotes, or not. Commas may be used in the literal if surrounded by double quotes.

A CSV parser will be able to parse and interpret the following CSV file rows:

123,"This is a sample field, This is another sample field",456

123,'This is a sample field',456

123,This is a sample field,456

4.1.6 Leading and trailing spaces

In the case of numeric values the use of a leading, embedded or trailing space is inappropriate. Spaces should not be used where a value has a Numeric characteristic.

Where the value has a "text" characteristic that by its nature can have a space or spaces as part of the structure, only embedded spaces are permitted. Leading and trailing space-characters immediately adjacent to the comma field separators should not be included in the CSV file. Therefore   "John Citizen"... resolves to ---,John Citizen,--- or ---,"John Citizen",---.

Where values must have a leading or trailing spaces as a valid part of the data it must be delimited with double-quote characters. In this way it indicates that the leading and trailing spaces are a component part of the data for example:

---," John Citizen ",---

4.1.7 Tab characters

Tab characters shall not be used in CSV files.

4.1.8 Special characters

The use of CDATA (non-parsed character data as defined in Ref. [3]), characters "<", ">", "&" and hexadecimal characters is prohibited. This is in view of potential use of ASEXML carrying CSV data as per this specification.

4.1.9 Positive and negative numeric values

Positive numbers in CSV file shall be unsigned. Negative numbers shall be prefixed with a negative sign.

4.1.10 Leading and trailing zeroes

There shall be no leading zeroes in numeric values unless a specific data format requires this. Trailing zeroes are allowed and will be ignored, if provided.

4.1.11 Units

All measurements of gas quantity will be in Gigajoules, throughout the STTM, unless specifically noted otherwise.

4.1.12 Data dictionary

Table 3 Field Definitions

Field Name	Data Type	Description		Relevant File Type Descriptor
allocationquantity	numeric(18,9)	The flow quantity for the facility expressed in GJ		PAD,PAU, PAF, PAP, PAR, TPD, TPU, TPF, TPP, TPR
commencementdate	datetime	**Value**	**Description**	BID, OFR, CGB, CGO
		YYYY-MM-DD	Gas day date when the record takes effect. Any time component supplied will be ignored and this date is inclusive. Example: 2009-02-24 2008-12-01	
comments	varchar(255)	Comments associated with the Contingency Gas bid or offer.		CGB, CGO
consumedenergygj	numeric(18,9)	The metered energy quantity for the CTM.		CTD, CTU, CTP, CTF, CTR

counterpartyfacilityid	varchar(10)	The Facility (or hub) Identifier for the Counter-party to the MSV:		MSV, MVC
		• SEAGAS (South East Australia Gas pipeline) • MSP (Moomba to Sydney pipeline) • MAP (Moomba to Adelaide pipeline) • EGP (Eastern Gas Pipeline) • ROS (Rosalind Park production facility, Sydney Gas) • RBP (Roma to Brisbane Pipeline) • NETSYD1 (distribution service at the Sydney hub) • NETADL1 (distribution service at the Adelaide hub) • NETBRI1 (Brisbane hub facility)		
counterpartyid	int	Trading Participant unique counterparty identifier		MSV, MVC
counterpartytype	char(3)	**Value**	**Description**	MSV, MVC
		STH	STTM Shipper to hub	
		SFH	STTM Shipper from the hub	
		NAH	STTM User at the hub	
crn	varchar(20)	Unique Identifier for Registered Facility or Distribution Service. The format of the CRN is given by: ***XXHYYYYYY*** where **:** **XX**= 'RS' for Registered Service **H** = Hub Id (1=SYD, 2 = ADL, 3=BRI) **YYYYYY** = unique identifier for the Registered Service.		PAD, PAU, PAF, PAP, PAR
directioncode	char(1)	**Value**	**Description**	CGB, CGO
		T	Registered Facility Service to the hub	

		F	Registered Facility Service from the hub	
		A	Registered Distribution Service at the hub	
duplicatestatus	varchar(5)	**Value**	**Description**	ACK, MCK
		Yes	If the transaction id is duplicated	
		No	If the transaction id is not duplicated	
eventcode	int	Event code is a numeric value representing the error. Example: 91		ACK, MCK
eventcodedescription	varchar(256)	Event code description describes the event code in question. Example: Gas quantities must not have decimal places		ACK, MCK
eventcontext	varchar(256)	Event context is an optional value giving more information about the Event.		ACK, MCK
eventseverity	varchar(15)	**Value**	**Description**	ACK, MCK
		Information	If the error level is acceptable	
		Warning	If the error needs further attention	
		Error	The transaction is in Error and hence cannot be processed	
facilityallocationidentifier	Varchar(30)	Where applicable, this unique identifier identifies the facility allocation data file used in preparing the registered facility service allocation data submitted by an allocation agent.		TPD, TPU, TPF, TPP, TPR
facilityhubcapacity	int	STTM Capacity of the Facility expressed in GJ		FHC

facilityid	varchar(10)	The current list of Facility IDs are: 'MSP' – Moomba to Sydney pipeline 'EGP' – Eastern Gas Pipeline (EGP) pipeline to Sydney 'MAP' – Moomba to Adelaide pipeline 'SEAGAS' – South East Aust. Gas pipeline to Adelaide 'ROS' – Rosalind Park production facility 'NETSYD1' – Distribution service at the Sydney Hub 'NETADL1' – Distribution service at the Adelaide Hub'NETBRI1' – Brisbane Hub Facility NETBRI1' – Brisbane – Network 1 'NETXBRI2' – South East Queensland Distribution System 'NETXBRI3' – Brisbane North and Ipswich Distribution System 'NETYBRI4' Swanbank Facility – Deemed Distribution System 'NETYBRI5' Gibson Island Facility – Deemed Distribution System 'NETYBRI6' Lytton Facility – Deemed Distribution System Note: 'NETBRI1' – Brisbane – Network 1 must not be used for the submission of Contingency Gas Bids and Offers.		FHC, CGB, CGO, PAD, PAU, PAF, PAP, PAR, TPD, TPU, TPF, TPP, TPR, MOS
filetypedescriptor	char(3)	**Value**	**Description**	This will be used to identify the transaction type.
		BID	Ex Ante Bid data	
		OFR	Ex Ante Offer data	
		CGB	Contingency Bids	
		CGO	Contingency Offer	
		PTW	Price Taker Bid data	
		FHC	Facility Hub Capacity data	
		MSV	Market Schedule Variation Submission data	
		MOS	MOS Offer data	

		MVC	Market Schedule Variation Confirmation data	
		PAD	Facility Allocation data (Daily)	
		PAU	Facility Allocation data (Update)	
		PAF	Facility Allocation data (Final)	
		PAP	Facility Allocation data (Preliminary)	
		PAR	Facility Allocation data (Revision)	
		MCK	Message Acknowledgement	
		ACK	Transaction Acknowledgement	
		MSD	MOS Step Allocation data (Daily)	
		MSU	MOS Step Allocation data (Update)	
		MSF	MOS Step Allocation data (Final)	
		MSP	MOS Step Allocation data (Preliminary)	
		MSR	MOS Step Allocation data (Revision)	
		NAD	Deemed STTM Distribution System Allocation (Daily)	
		NAU	Deemed STTM Distribution System Allocation (Update)	

		NAP	Deemed STTM Distribution System Allocation (Preliminary)	
		NAF	Deemed STTM Distribution System Allocation (Final)	
		NAR	Deemed STTM Distribution System Allocation (Revision)	
		CTD	Pipeline CTM Data (Daily)	
		CTU	Pipeline CTM Data (Update)	
		CTP	Pipeline CTM Data (Preliminary)	
		CTF	Pipeline CTM Data (Final)	
		CTR	Pipeline CTM Data (Revision)	
		TPD	Registered Facility Service Allocation data (Daily)	
		TPU	Registered Facility Service Allocation data (Update)	
		TPF	Registered Facility Service Allocation data (Final)	
		TPP	Registered Facility Service Allocation data (Preliminary)	
		TPR	Registered Facility Service Allocation data (Revision)	
		CFM	Data Confirmation	
gasdate	datetime	**Value**	**Description**	FHC, PAD,

		YYYY-MM-DD	Gas day date that the data is relevant to. Example: 2009-02-24 2008-12-01	PAU, PAF, PAP, PAR, TPD, TPU, TPF, TPP, TPR, MSD,MSU, MSF,MSP, MSR, MSV, MVC, NAD, NAU, NAP, NAF, NAR, CTD, CTU, CTP, CTF, CTR
initiatingmessageid	varchar(30)	The message id supplied by the Market Participant for the transaction. Example: ABCD-1234		ACK, MCK, CFM
marketcode	char(4)	**Value**	**Description**	All
		STTM	Short Term Trading Market	
mirn	varchar(10)	Meter Installation Registration Number		CTD, CTU, CTP, CTF, CTR
mosperiod	varchar(8)	The monthly MOS period e.g. Jun-2014		MOS
mosquantity	numeric(18,9)	Market Operator Service Quantity expressed in GJ.		PAD, PAU, PAF, PAP, PAR
mosstepallocationquantity	numeric(18,9)	Market Operator Service (MOS) stack step Allocation Quantity expressed in GJ.		MSD, MSU, MSF, MSP, MSR
mosstackid	int	Market Operator Service stack Identifier.		MSD, MSU, MSF, MSP, MSR
mosstepid	int	Market Operator Service stack step Identifier		MSD, MSU, MSF, MSP, MSR
mostype	char(1)	**Value**	**Description**	MOS
		I	Increase	
		D	Decrease	
msvquantity	numeric(18,9)	Market Schedule Variation Quantity expressed in GJ		MSV, MVC
msvid	int	The AEMO identifier for a submitted Market Schedule Variation		MVC

msvstatus	char(10)	This is the status used in MSV confirmation transactions. A valid MSV confirmation transaction will set the status of the target MSV based on this field. Valid values are 'REJECT' and 'CONFIRM'		MVC
msvtype	char(1)	**Value**	**Description**	MSV, MVC
		I	Increase	
		D	Decrease	
networkidentifier	varchar(20)	Deemed STTM Distribution System (Network) Identifier		NAD, NAU, NAP, NAF, NAR
participantidentifier	varchar(20)	STTM Participant Identifier		NAD, NAU, NAP, NAF, NAR
qualityid	int	Quality identifier for CTM data: **205** : Normal – Actual Read - PO **206** : Estimated - PO **207** : Substituted - PO		CTD, CTU, CTP, CTF, CTR
quantity	numeric(18,9)	The distribution system (hub) flow quantity expressed in MJ. Example: 2.200000000 4.560000000		NAD, NAU, NAP, NAF, NAR
quantity	int	The flow quantity expressed in GJ. Example: 20000 30000		PTW
receiptdatetime	datetime	Receipt Date is the date time when the acknowledgement is created. Example: 2009-02-15T06:47:05		ACK, MCK
receiptid	varchar(30)	Receipt Id is the Acknowledgement Id given by Market Operator for the transaction initiated. Example: AEMO-ACK-1234		ACK, MCK
status	varchar(10)	**Value**	**Description**	ACK, MCK
		Accept	If the validation passes	

		Reject	If the validation fails	
stepxxprice	numeric(15,4)	Step price in AUD corresponding to the Bid/Offer Step. 'xx' is the step number from 1 to 10. Example: 5.0000 3.5000		BID, OFR, CGB, CGO, MOS
stepxxquantity	int	Step quantity expressed in GJ corresponding to the Bid/Offer Step. 'xx' is the step number from 1 to 10.		BID, OFR, CGB, CGO, MOS
stepxxtrn	varchar(20)	Step Trading Right Number corresponding to the Offer Step (Refer trn in data dictionary). 'xx' is the step number from 1 to 10.		MOS
submitterid	int	Id of the party submitting Market Schedule Variation		MSV, MVC
submittertype	char(3)	**Value**	**Description**	MSV, MVC
		STH	Shipper to the hub	
		SFH	Shipper from the hub	
		NAH	STTM User at the hub	
submitterfacilityid	varchar(10)	The Facility Identifier for the Submitter • SEAGAS (South East Australia Gas pipeline) • MSP (Moomba to Sydney pipeline) • MAP (Moomba to Adelaide pipeline) • EGP (Eastern Gas Pipeline) • ROS (Rosalind Park production facility, Sydney Gas) • RBP (Roma to Brisbane Pipeline) • NETSYD1 (distribution service at the Sydney hub) • NETADL1 (distribution service at the Adelaide hub) • NETBRI1 (Brisbane hub facility)		MSV, MVC

				BID, OFR, CGB, CGO
terminationdate	datetime	**Value**	**Description**	
		YYYY-MM-DD	Gas day date when the record ceases to take effect and this date is inclusive. Example: 2009-02-24 2008-12-01	
trn	varchar(20)	Trading Right Number in the format – XXHYYYYYYZZZ where : XX= 'TR' for Trading Right H = Hub Id (1=SYD, 2 = ADL, 3=BRI) YYYYYY = numeric unique identifier for Registered Service. ZZZ = numeric unique identifier for a Trading Right associated to a Registered Service E.g. for a registered service with CRN = RS1000001 for Hub 1, possible TRNs may be: TR1000001001 = 1st TRN for CRN RS1000001 TR1000001002 = 2nd TRN for CRN RS1000001 TR1000001003 = 3rd TRN for CRN RS1000001		PTW, TPD, TPF, TPP, TPU, TPR
ucmosquantity	numeric(18,9)	Overrun Market Operator Service Quantity expressed in GJ.		PAD, PAU, PAF, PAP, PAR

4.1.13 File naming convention

General format of STTM filename is defined by the following regular expression:

STTM_[0-9]{1,3}_[0-9]{1,3}_(BID|OFR|CGB|CGO|PTW|FHC|MOS|MSV|MVC|PA[DURPF]|ACK|MCK|MS[DURPF]|TP[DURPF]|CT[DURPF]|NA[DURPF]|CFM)_20\d\d(0[1-9]|1[012])(0[1-9]|[12][0-9]|3[01])([01][0-9]|[2][0-3])(0[0-9]|[12345][0-9])(0[0-9]|[12345][0-9])_([A-Z0-9_\-]{10,30})_[0-9]{1,3}[.](CSV|TMP)

However, specific validation will be performed on each component detailed below before acknowledging the message.

Format of each component in the filename is detailed below:

Table 4 Filename Format

Name Part	Regular Expression
Market Code	"STTM"
Fixed Character	[_] (underscore)
The CSV file initiator identifier	[0-9]{1,3}
Fixed Character	[_] (underscore)
The CSV file recipient	[0-9]{1,3}
Fixed Character	[_] (underscore)
File type descriptor as given in the Data dictionary	(BID|OFR|CGB|CGO|PTW|FHC|MOS|MSV|MVC|PA[DURPF]|ACK|MCK|MS[DURPF]]|TP[DURPF]|CT[DURPF]|NA[DURPF]|CFM)
Fixed Character	[_] (underscore)
Date/timestamp in the format YYYYMMDDhhmmss when the file has been generated, 24 hour format market time	20\d\d(0[1-9]|1[012])(0[1-9]|[12][0-9]|3[01])([01][0-9]|[2][0-3])(0[0-9]|[12345][0-9])(0[0-9]|[12345][0-9]) (This could be date time, in YYYYMMDDhhmmss format e.g. 20090313122457)
Fixed Character	[_] (underscore)
Message Identifier (greater than or equal to 10 characters and less than or equal to 30 characters long) uniquely identifying the transaction which will be used in AEMO and participant systems for traceability purposes	([A-Z0-9_\-]{10,30})
Fixed Character	[_] (underscore)
Number of rows of data excluding the header information	[0-9]{1,3} Note: Files are limited to a maximum of 999 rows of data.
The file extension of "CSV" or "TMP" separated from the file name with a	[.](CSV|TMP)

period "."	

Here is an example of a file name:

STTM_3_13_BID_20090212131500_ABCDEF-123456_10.CSV

File extension	Description
CSV	Files containing comma-separated values

Each name part in the file name has business significance and will be validated against STTM Market Systems. Number of rows is required in the file name to make sure that the submitted data conforms to the data intended to be submitted.

4.1.14 File header

Every uploaded file must consist of a header and a body. The header must be separated from the body by a carriage return and linefeed, i.e. CR + LF.

The header allows for the files to be viewed using third party tools in a user friendly manner but is ignored during processing.

The body contains one or more rows of data to be populated into the appropriate STTM WebExchanger (S-WEX) screen or uploaded into the 'IN' folder for a transactional exchange of data.

The fields of the CSV file header are as specified below.

Bid/Offer

A Trading Participant will have the ability to submit Ex Ante (applies to d-1, d-2 and d-3) Bid/Offer information, Contingency Gas (CG) Bid/Offer information and Market Operator Service (MOS) Offer information via the file upload facility provided within the S-WEX user interface or via the FTP upload facility provided by S-WEXIE (S-WEX Interface Engine).

The following should clarify the terminology used for the description of the bidding information:

- *Bid/Offer* – a collection of up to 10 *Bid/Offer Steps*

- *Bid/Offer Step* – a price-quantity step in an ex-ante or CG *Bid/Offer*.

- *MOS Offer Step* – a price-quantity-TRN step in a *MOS Offer*
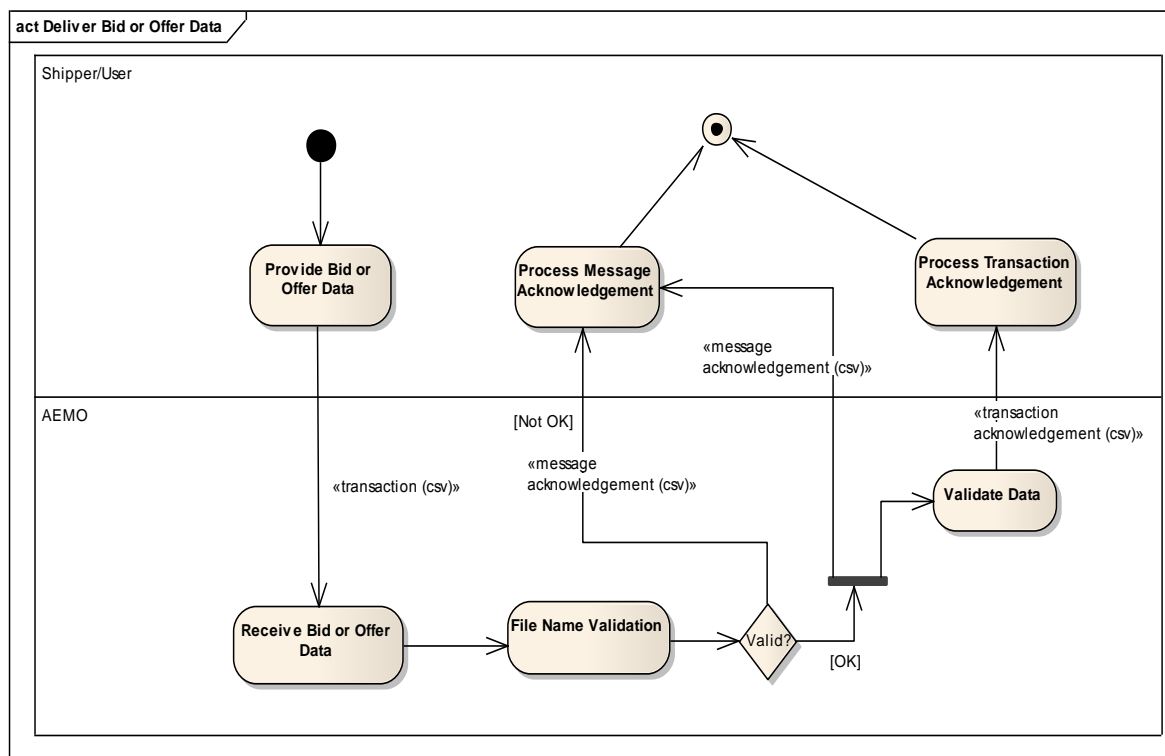
Figure 8. Ex Ante Bid/Offer Interface – Activity Diagram

4.1.15 Ex Ante Bid Transaction Definition

Interface type	FileType Descriptor	Priority	Data Type	From	To	Comments
File	BID	High	CSV	Shipper, User	AEMO	Only one Bid is allowed per file

File header fields are to be set as per the following table:

Table 5 Bid fields

Field name	M/O/NR	Description
commencementdate	M	2009-02-12
terminationdate	M	2009-02-15
trn	M	ABCD1234 (Actual format to be determined)
step01price	M	1st bid step price
step01quantity	M	1st bid step quantity
step02price	O	2nd bid step price
step02quantity	O	2nd bid step quantity
step03price	O	3rd bid step price
step03quantity	O	3rd bid step quantity
step04price	O	4th bid step price
step04quantity	O	4th bid step quantity
step05price	O	5th bid step price
step05quantity	O	5th bid step quantity
step06price	O	6th bid step price
step06quantity	O	6th bid step quantity
step07price	O	7th bid step price
step07quantity	O	7th bid step quantity
step08price	O	8th bid step price
step08quantity	O	8th bid step quantity
step09price	O	9th bid step price.
step09quantity	O	9th bid step quantity
step10price	O	10th bid step price.
step10quantity	O	10th bid step quantity

Price-quantity steps must be specified in pairs. That is, if price for a particular step has been specified, then the quantity for the same step must be specified too. The opposite is also true: if the quantity is specified, the corresponding step's price field becomes mandatory. There must be no gap in the steps, i.e. if step n exists in the file, steps 1 to n-1 should also exist in the file.

4.1.16 Examples

A Bid from participant for TRN ABCD123456, with all bid steps defined:

commencementdate,terminationdate,trn,step01price,step01quantity,step02price,step02quantity,step03price,
step03quantity,step04price,step04quantity,
step05price,step05quantity,step06price,step06quantity,step07price,step07quantity,step08price,step08quantit
y,step09price,step09quantity,step10price,step10quantity
2009-02-12,2009-02-
15,ABCD123456,3.1230,25000,2.9456,30000,2.8560,35000,2.7670,37000,2.6789,39000,2.5890,39500,2.49
81,40500,2.3123,41000,2.2100,42000,2.1000,43000

A bid from participant for TRN ABCD123456 with just two bid steps specified, to be uploaded:

commencementdate,terminationdate,trn,step01price,step01quantity,step02price,step02quantity,step03price,
step03quantity,step04price,step04quantity,step05price,step05quantity,step06price,step06quantity,step07pric
e,step07quantity,step08price,step08quantity,step09price,step09quantity,step10price,step10quantity
2009-02-12, 2009-02-15,ABCD123456,2.4230,25000,2.3456,30000,,,,,,,,,,,,,,,,

4.1.17 Ex Ante Offer Transaction Definition

Interface type	FileType Descriptor	Priority	Data type	From	To	Comments
File	OFR	High	CSV	Shipper	AEMO	Only one Offer is allowed per file

File header fields are to be set as per following table:

Table 6 Offer fields

Field name	M/O/NR	Description
commencementdate	M	2009-02-12
terminationdate	M	2009-02-15
Trn	M	ABCD1234 (Actual format to be determined)
step01price	M	1st offer step price
step01quantity	M	1st offer step quantity
step02price	O	2nd offer step price
step02quantity	O	2nd offer step quantity
step03price	O	3rd offer step price
step03quantity	O	3rd offer step quantity
step04price	O	4th offer step price
step04quantity	O	4th offer step quantity
step05price	O	5th offer step price
step05quantity	O	5th offer step quantity
step06price	O	6th offer step price
step06quantity	O	6th offer step quantity
step07price	O	7th offer step price
step07quantity	O	7th offer step quantity
step08price	O	8th offer step price
step08quantity	O	8th offer step quantity
step09price	O	9th offer step price.
step09quantity	O	9th offer step quantity
step10price	O	10th offer step price.
step10quantity	O	10th offer step quantity

Price-quantity steps must be specified in pairs. That is, if price for a particular step has been specified, then the quantity for the same step must be specified too. The opposite is also true: if the quantity is specified, the corresponding step's price field becomes mandatory. There must be no gap in the steps, i.e. if step n exists in the file, steps 1 to n-1 should also exist in the file.

4.1.18 Examples

An offer from participant for TRN ABCD123456, with all offer steps defined:

```
commencementdate,terminationdate,trn,step01price,step01quantity,step02price,step02quantity,step03price,
step03quantity,step04price,step04quantity,step05price,step05quantity,step06price,step06quantity,step07pric
e,step07quantity,step08price,step08quantity,step09price,step09quantity,step10price,step10quantity
2009-02-12,2009-02-
15,ABCD123456,2.1230,25000,2.3456,30000,2.4560,35000,2.5670,37000,2.6789,39000,2.7890,39500,2.89
81,40500,2.9123,41000,3.0100,42000,3.1000,43000
```

An offer from participant for TRN ABCD123456 with just two offer steps specified, to be uploaded:

```
commencementdate,terminationdate,trn,step01price,step01quantity,step02price,step02quantity,step03price,
step03quantity,step04price,step04quantity,step05price,step05quantity,step06price,step06quantity,step07pric
e,step07quantity,step08price,step08quantity,step09price,step09quantity,step10price,step10quantity
2009-02-12, 2009-02-15,ABCD123456,2.1230,25000,2.3456,30000,,,,,,,,,,,,,,,,
```

4.1.19 Contingency Bid Transaction Definition

Interface type	FileType Descriptor	Priority	Data type	From	To	Comments
File	CGB	High	CSV	Shipper, User	AEMO	Only one Contingency Bid is allowed per file

File header fields are to be set as per the following table:

Table 7 Bid fields

Field name	M/O/NR	Description/Example
commencementdate	M	2009-02-12
terminationdate	M	2009-02-15
facilityid	M	MSP, MAP
directioncode	M	T, F, A
comments	O	Optional comments relating to the contingency gas bid/offer
step01price	M	1st bid step price
step01quantity	M	1st bid step quantity
step02price	O	2nd bid step price
step02quantity	O	2nd bid step quantity
step03price	O	3rd bid step price
step03quantity	O	3rd bid step quantity
step04price	O	4th bid step price
step04quantity	O	4th bid step quantity
step05price	O	5th bid step price
step05quantity	O	5th bid step quantity
step06price	O	6th bid step price
step06quantity	O	6th bid step quantity
step07price	O	7th bid step price
step07quantity	O	7th bid step quantity
step08price	O	8th bid step price
step08quantity	O	8th bid step quantity
step09price	O	9th bid step price.
step09quantity	O	9th bid step quantity
step10price	O	10th bid step price.
step10quantity	O	10th bid step quantity

Price-quantity steps must be specified in pairs. That is, if price for a particular step has been specified, then the quantity for the same step must be specified too. The opposite is also true: if the quantity is specified, the

corresponding step's price field becomes mandatory. There must be no gap in the steps, i.e. if step n exists in the file, steps 1 to n-1 should also exist in the file.

4.1.20 Examples

A Contingency Bid from participant for Facility MSP, with all bid steps defined:

commencementdate,terminationdate,facilityid,directioncode,comments,step01price,step01quantity,step02price,step02quantity,step03price,step03quantity,step04price,step04quantity,step05price,step05quantity,step06price,step06quantity,step07price,step07quantity,step08price,step08quantity,step09price,step09quantity,step10price,step10quantity
2009-02-12,2009-02-15,MSP,T,This is a comment,3.1230,25000,2.9456,30000,2.8560,35000,2.7670,37000,2.6789,39000,2.5890,39500,2.4981,40500,2.3123,41000,2.2100,42000,2.1000,43000

A Contingency Bid from participant for Facility MSP with just two bid steps specified, to be uploaded:

commencementdate,terminationdate,facilityid,directioncode,comments,step01price,step01quantity,step02price,step02quantity,step03price,step03quantity,step04price,step04quantity,step05price,step05quantity,step06price,step06quantity,step07price,step07quantity,step08price,step08quantity,step09price,step09quantity,step10price,step10quantity
2009-02-12, 2009-02-15,MSP,F,,3.1230,25000,2.3456,30000,,,,,,,,,,,,,

4.1.21 Contingency Offer Transaction Definition

Interface type	FileType Descriptor	Priority	Data type	From	To	Comments
File	CGO	High	CSV	Shipper, User	AEMO	Only one Contingency Offer is allowed per file

File header fields are to be set as per following table:

Table 8 Offer fields

Field name	M/O/NR	Description/Examples
commencementdate	M	2009-02-12
terminationdate	M	2009-02-15
facilityid	M	MSP, MAP
directioncode	M	T, F, A
comments	O	Optional comments relating to the contingency gas bid/offer
step01price	M	1st offer step price
step01quantity	M	1st offer step quantity
step02price	O	2nd offer step price
step02quantity	O	2nd offer step quantity
step03price	O	3rd offer step price
step03quantity	O	3rd offer step quantity
step04price	O	4th offer step price
step04quantity	O	4th offer step quantity
step05price	O	5th offer step price
step05quantity	O	5th offer step quantity
step06price	O	6th offer step price
step06quantity	O	6th offer step quantity
step07price	O	7th offer step price
step07quantity	O	7th offer step quantity
step08price	O	8th offer step price
step08quantity	O	8th offer step quantity
step09price	O	9th offer step price.
step09quantity	O	9th offer step quantity
step10price	O	10th offer step price.
step10quantity	O	10th offer step quantity

Price-quantity steps must be specified in pairs. That is, if price for a particular step has been specified, then the quantity for the same step must be specified too. The opposite is also true: if the quantity is specified, the

corresponding step's price field becomes mandatory. There must be no gap in the steps, i.e. if step n exists in the file, steps 1 to n-1 should also exist in the file.

4.1.22 Examples

A Contingency Offer from participant for Facility MSP, with all steps defined:

commencementdate,terminationdate,facilityid,directioncode,comments,step01price,step01quantity,step02price,step02quantity,step03price,step03quantity,step04price,step04quantity,step05price,step05quantity,step06price,step06quantity,step07price,step07quantity,step08price,step08quantity,step09price,step09quantity,step10price,step10quantity
2009-02-12,2009-02-15,MSP,F,This is a comment,2.1230,25000,2.3456,30000,2.4560,35000,2.5670,37000,2.6789,39000,2.7890,39500,2.8981,40500,2.9123,41000,3.0100,42000,3.1000,43000

A Contingency Offer from participant for Facility MSP with just two steps specified, to be uploaded:

commencementdate,terminationdate,facilityid,directioncode,comments,step01price,step01quantity,step02price,step02quantity,step03price,step03quantity,step04price,step04quantity,step05price,step05quantity,step06price,step06quantity,step07price,step07quantity,step08price,step08quantity,step09price,step09quantity,step10price,step10quantity
2009-02-12, 2009-02-15,MSP,A,,2.1230,25000,2.3456,30000,,,,,,,,,,,,

4.1.23 MOS Offer Transaction Definition

Interface type	FileType Descriptor	Priority	Data Type	From	To	Comments
File	MOS	High	CSV	MOS Provider	AEMO	Only one MOS Offer is allowed per file

File header fields are to be set as per the following table:

Table 8a MOS Offer fields

Field name	M/O/NR	Description
mosperiod	M	The monthly MOS period e.g. Jun-2014
facilityid	M	Valid pipeline identifier (e.g. EGP, MAP, MSP,RBP, SEAGAS)
mostype	M	I=Increase, D=Decrease
step01price	M	1st MOS offer step price
step01quantity	M	1st MOS offer step quantity
step01trn	M	1st MOS offer step trading right
step02price	O	2nd MOS offer step price
step02quantity	O	2nd MOS offer step quantity
step02trn	O	2nd MOS offer step trading right
step03price	O	3rd MOS offer step price
step03quantity	O	3rd MOS offer step quantity
step03trn	O	3rd MOS offer step trading right
step04price	O	4th MOS offer step price
step04quantity	O	4th MOS offer step quantity

Field name	M/O/NR	Description
step04trn	O	4th MOS offer step trading right
step05price	O	5th MOS offer step price
step05quantity	O	5th MOS offer step quantity
step05trn	O	5th MOS offer step trading right
step06price	O	6th MOS offer step price
step06quantity	O	6th MOS offer step quantity
step06trn	O	6th MOS offer step trading right
step07price	O	7th MOS offer step price
step07quantity	O	7th MOS offer step quantity
step07trn	O	7th MOS offer step trading right
step08price	O	8th MOS offer step price
step08quantity	O	8th MOS offer step quantity
step08trn	O	8th MOS offer step trading right
step09price	O	9th MOS offer step price.
step09quantity	O	9th MOS offer step quantity
step09trn	O	9th MOS offer step trading right
step10price	O	10th MOS offer step price.
step10quantity	O	10th MOS offer step quantity
step10trn	O	10th MOS offer step trading right

4.1.24 Examples

A MOS Offer for MOS Period June 2014 from participant for pipeline EGP for Increase MOS involving 2 trading rights with all offer steps defined:

```
mosperiod,facilityid,mostype,step01price,step01quantity,step01trn,step02price,

step02quantity,step02trn,step03price,step03quantity,step03trn,step04price,step04quantity,step04trn,

step05price,step05quantity,step05trn,step06price,step06quantity,step06trn,step07price,

step07quantity,step07trn,step08price,step08quantity,step08trn,step09price,step09quantity,

step09trn,step10price,step10quantity,step10trn

Jun-2014,EGP,I,1.0000,25,TR0000123001,2.0000,

30,TR0000123001,2.5000,5,TR0000123002,2.7670,10,TR0000123002,3.000,

20,TR0000123001,3.5890,40,TR0000123001,4.0000,

25,TR0000123002,4.3123,50,TR0000123002,5.0000,25,

TR0000123001,5.1000,25,TR0000123001
```

A MOS Offer for MOS Period June 2014 from participant for pipeline EGP for Decrease MOS involving 2 trading rights with 2 offer steps defined:

```
mosperiod,facilityid,mostype,step01price,step01quantity,step01trn,step02price,

step02quantity,step02trn,step03price,step03quantity,step03trn,step04price,step04quantity,step04trn,

step05price,step05quantity,step05trn,step06price,step06quantity,step06trn,step07price,
```

step07quantity,step07trn,step08price,step08quantity,step08trn,step09price,step09quantity,

step09trn,step10price,step10quantity,step10trn

Jun-2014,EGP,D,1.0000,100,TR0000234001,2.0000,

50,TR0000234002,,,,,,,,,,,,,,,,,,,,,,,

Price Taker Bid

The Trading Participant provides the Price Taker Bid Data to AEMO and AEMO sends the ACK/NACK depending upon the initial validation results. Subsequent validation is performed on the data and a transaction acknowledgement is sent to the Trading Participant.

Figure 9. Price Taker Bid Interface – Activity Diagram

4.1.25 Transaction Definition

Interface type	FileType Descriptor	Priority	Data type	From	To	Comments
File	PTW	High	CSV	User	AEMO	Only one Price Taker Bid is allowed per file

File header fields are to be set as per following table:

Table 9 Price Taker Bid fields

Field name	M/O/NR	Field value / example
gasdate	M	2009-02-12
trn	M	ABCD123456 (Actual format to be determined)
quantity	M	10000

4.1.26 Examples

gasdate,trn, quantity

2009-02-12,ABCD123456,10000

Facility Hub Capacity

The STTM Pipeline Operator provides the Facility Hub Capacity Data to AEMO and AEMO sends the ACK/NACK depending upon the initial validation results. Subsequent validation is performed on the data and a transaction acknowledgement is sent to the STTM Pipeline Operator.

Figure 10. Facility Hub Capacity Interface – Activity Diagram

4.1.27 Transaction Definition

Interface type	FileType Descriptor	Priority	Data type	From	To	Comments
File	FHC	High	CSV	STTM Pipeline Operator	AEMO	

File header fields are to be set as per following table:

Table 10 Facility Hub Capacity fields

Field name	M/O/NR	Field value / example
facilityid	M	MSP, MAP
gasdate	M	2009-02-15
facilityhubcapacity	M	12345

4.1.28 Examples

```
facilityid, gasdate, facilityhubcapacity
MSP,2009-02-12,12345
```

Facility Allocation

The Allocation Agent provides the Facility Allocation Data by CRN to AEMO and AEMO sends the ACK/NACK depending upon the initial validation results. Subsequent validation is performed on the data and a transaction acknowledgement is sent to the Allocation Agent.

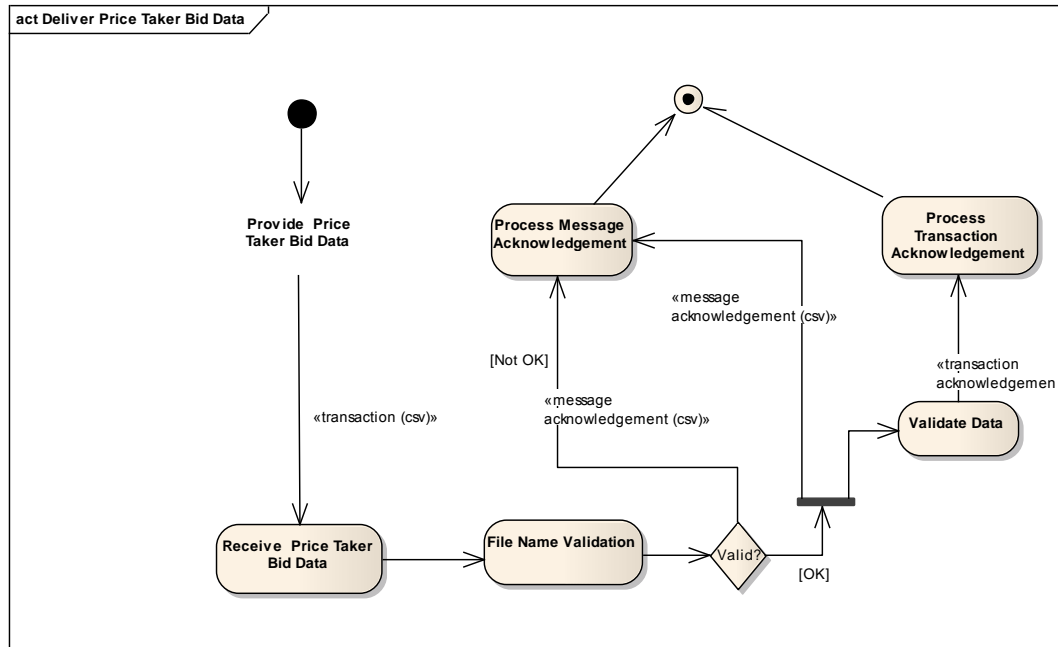Figure 11. Facility Allocation Interface – Activity Diagram

4.1.29 Transaction Definition

Interface type	FileType Descriptor	Priority	Data type	From	To	Comments
File	PAD, PAU, PAF, PAP, PAR	High	CSV	Allocation Agent	AEMO	

File header fields are to be set as per following table:

Table 11 Facility Allocation fields

Field name	M/O/NR	Field value / example
gasdate	M	2009-02-12
crn	M	ABCD1234 (Actual format to be determined)
facilityid	M	MSP. MAP
allocationquantity	M	50000000.000000000
mosquantity	M	30000000.000000000
ucmosquantity	M	10000000.000000000

4.1.30 Examples

```
gasdate,crn,facilityid,allocationquantity,mosquantity,ucmosquantity
2009-02-12,ABCD1234,MSP,50000000.000000000, 30000000.000000000,10000000.000000000
```

Registered Facility Service Allocation

The Allocation Agent provides the Registered Facility Service Allocation data by TRN to AEMO and AEMO sends the ACK/NACK depending upon the initial validation results. Subsequent validation is performed on the data and a transaction acknowledgement is sent to the Allocation Agent.
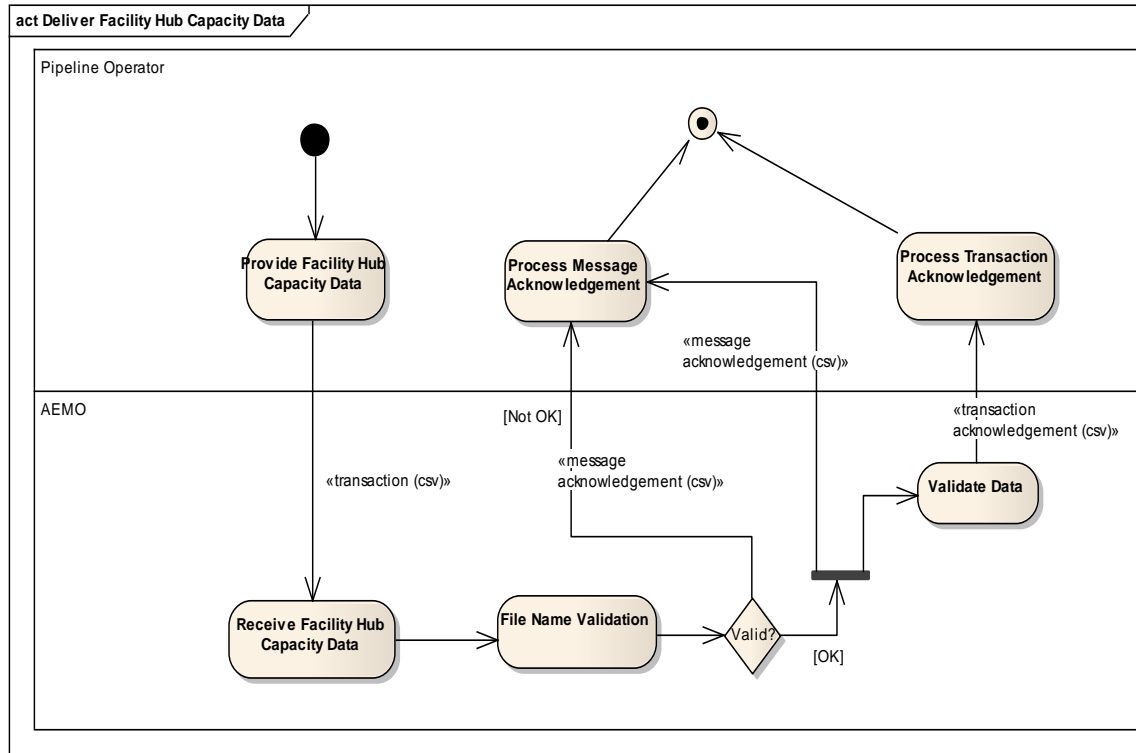

Figure 12. Registered Facility Service Allocation Interface – Activity Diagram

4.1.31 Transaction Definition

Interface type	*FileType Descriptor*	*Priority*	*Data type*	*From*	*To*	*Comments*
File	TPD, TPU, TPF, TPP, TPR	High	CSV	Allocation Agent	AEMO	

File header fields are to be set as per following table:

Table 12 Registered Facility Service Allocation fields

Field name	*M/O/NR*	*Field value / example*
gasdate	M	2009-02-15
trn	M	Format of TRN to be determined
facilityid	M	MSP, MAP
allocationquantity	M	1234.000000000
facilityallocationidentifier	O	AEMO-ACK-1234

4.1.32 Examples

gasdate,trn, facilityid, allocationquantity, facilityallocationidentifier
2009-02-12,ABCD1234,MSP,1234.000000000, AEMO-ACK-1234

MOS Step Allocation

The Allocation Agent provides the MOS Step Allocation Data to AEMO and AEMO sends the ACK/NACK depending upon the initial validation results. Subsequent validation is performed on the data and a transaction acknowledgement is sent to the Allocation Agent.
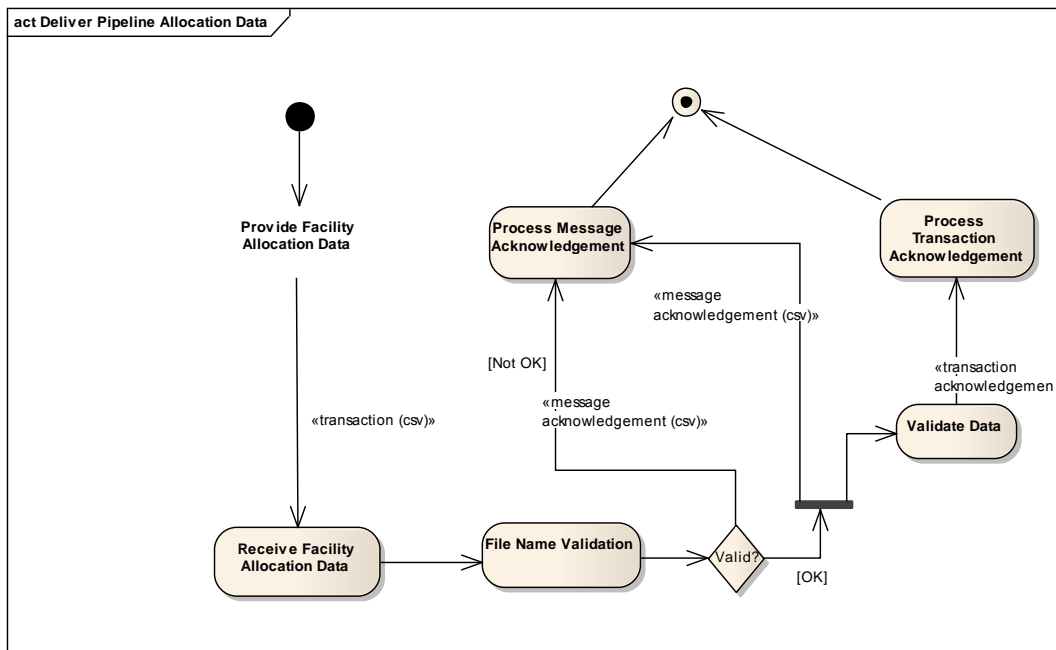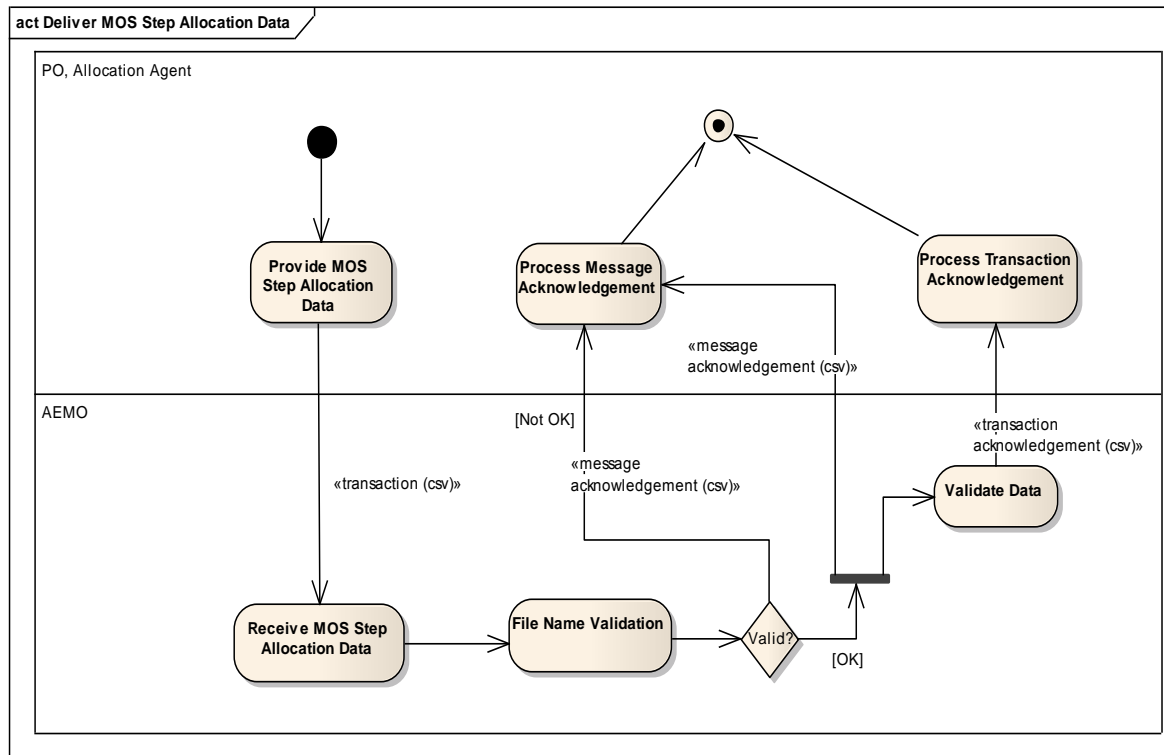

Figure 13. MOS Step Allocation Interface – Activity Diagram

4.1.33 Transaction Definition

Interface type	FileType Descriptor	Priority	Data type	From	To	Comments
File	MSD, MSU, MSF, MSP, MSR	Low	CSV	Allocation Agent	AEMO	

File header fields are to be set as per following table:

Table 13 MOS Step Allocation fields

Field name	M/O/NR	Field value / example
gasdate	M	2009-02-15
mosstackid	M	12
mosstepid	M	1
facilityid	M	MSP, MAP
mosstepallocationquantity	M	1234.0000000

4.1.34 Examples

gasdate,mosstackid,mosstepid,facilityid,mosstepallocationquantity
2009-02-12,1,10,MSP,1234.000000000

Market Schedule Variation Data

STTM Trading Participant provides Market Schedule Variation Data to AEMO and AEMO sends the ACK/NACK depending upon the initial validation results. Subsequent validation is performed on the data and a transaction acknowledgement is sent to the submitter.
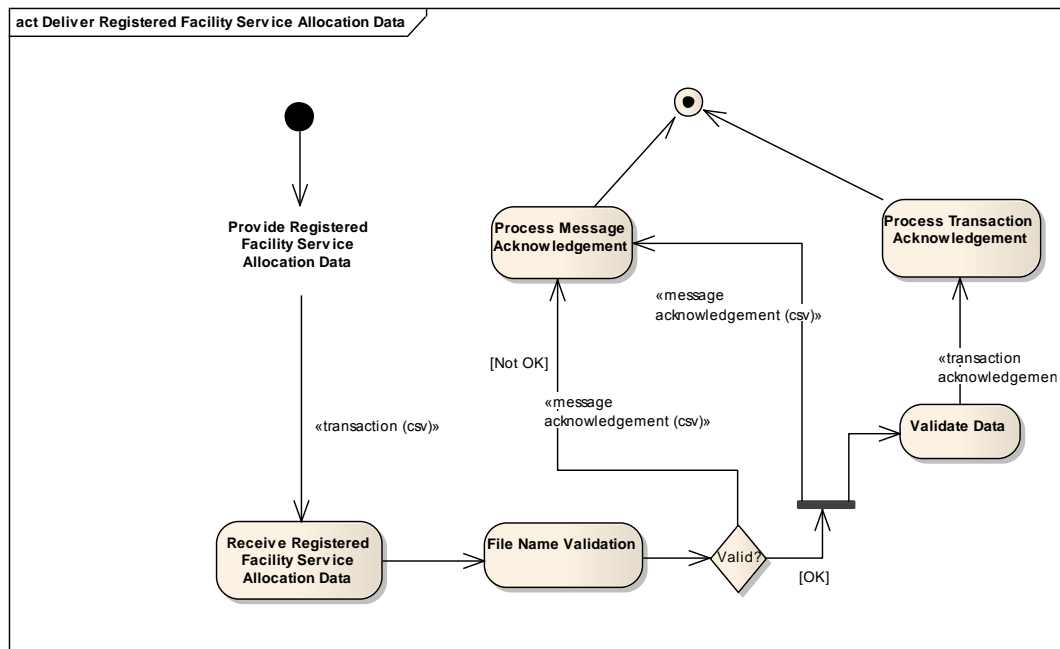

Figure 14. Market Schedule Variation Interface – Activity Diagram

4.1.35 MSV Submission Transaction Definition

Interface type	FileType Descriptor	Priority	Data type	From	To	Comments
File	MSV	Low	CSV	Shipper, User	AEMO	Only one MSV submission is allowed per file

File header fields are to be set as per following table:

Table 14 Market Schedule Variation Submission fields

Field name	M/O/NR	Field value / example
gasdate	M	2009-02-15
submitterid	M	3
submittertype	M	STH
submitterfacilityid	M	MSP, MAP

Field name	M/O/NR	Field value / example
counterpartyid	M	4
counterpartytype	M	STH (Shipper to Hub)
counterpartyfacilityid	O	MSP, MAP *Note: counterpartyfacilityid must not be provided unless the submitter is a Shipper flowing to the hub and the counterparty is a Shipper flowing from the hub.*
msvtype	M	I (Increase)
msvquantity	M	1234.000000000

4.1.36 Examples

```
gasdate, submitterid, submittertype, submitterfacilityid,
counterpartyid,counterpartytype,counterpartyfacilityid,msvtype,msvquantity
2009-02-12,3,STH,MSP,4,STH,MSP,I,1234.000000000
```

4.1.37 MSV Confirmation Transaction Definition

Interface type	FileType Descriptor	Priority	Data type	From	To	Comments
File	MVC	Low	CSV	Shipper, User	AEMO	Only one MSV confirmation is allowed per file

File header fields are to be set as per following table:

Table 15 Market Schedule Variation Confirmation fields

Field name	M/O/NR	Field value / example
gasdate	M	2009-02-15
submitterid	M	3
submittertype	M	STH
submitterfacilityid	M	MSP, MAP
counterpartyid	M	4
counterpartytype	M	STH (Shipper to Hub)
counterpartyfacilityid	O	MSP, MAP
msvtype	M	I (Increase)
msvquantity	M	1234.000000000
msvid	M	104
msvstatus	M	CONFIRM, REJECT

4.1.38 Examples

```
gasdate, submitterid, submittertype, submitterfacilityid,
counterpartyid,counterpartytype,counterpartyfacilityid,msvtype,msvquantity,msvid,msvstatus
2009-02-12,3,STH,MSP,4,STH,MSP,I,1234.000000000,104,CONFIRM
```

Data Confirmation

The STTM Facility Operator provides Confirmation Data to AEMO and AEMO sends the ACK/NACK depending upon the initial validation results. Subsequent validation is performed on the data and a transaction acknowledgement is sent to the STTM Facility Operator.
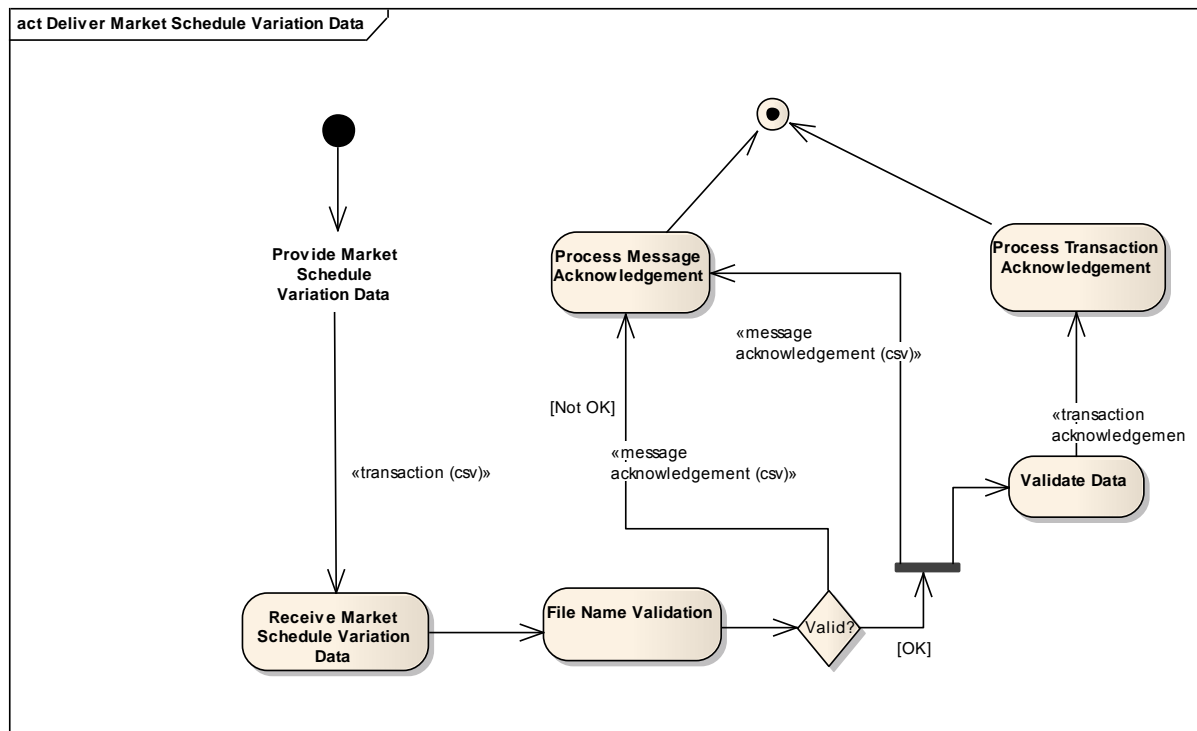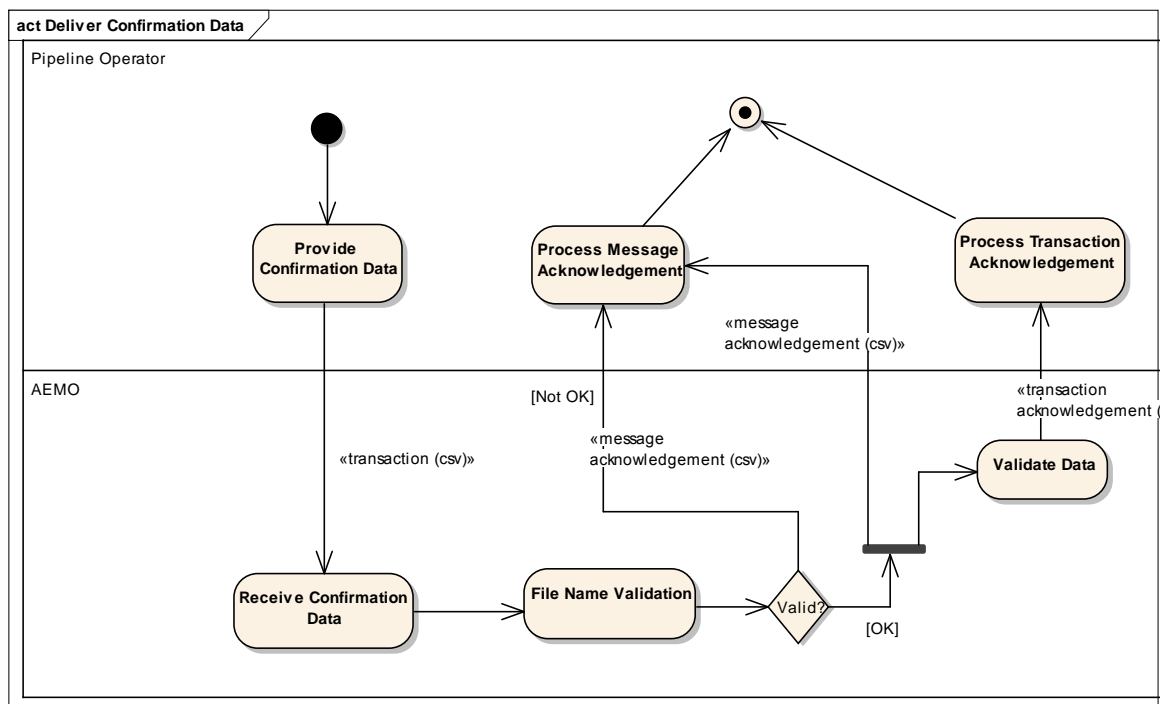
Figure 15. Data Confirmation Interface – Activity Diagram

4.1.39 Transaction Definition

Interface type	FileType Descriptor	Priority	Data type	From	To	Comments
File	CFM	High	CSV	STTM Facility Operator	AEMO	

File header fields are to be set as per following table:

Table 16 Data Confirmation fields

Field name	M/O/NR	Field value / example
initiatingmessageid	M	ABCD-1235
filetypedescriptor	M	FHC

4.1.40 Examples

```
initiatingmessageid, filetypedescriptor
ABCD-1235,FHC
```

Deemed STTM Distribution System Allocation

The activity diagram below shows the activity flow that follows a submission of Deemed STTM Distribution System Allocation Data by the Pipeline Operator to the AEMO STTM systems. Upon receipt of the transaction file, the STTM systems will perform primary validation (file name) and provide a Message Acknowledgment back to the submitter indicating that the file is valid or that it is in error. If the file is found to be invalid during primary validation, no further action is taken by the STTM system. If the file is found to be valid during the primary validation, the STTM system will proceed to validate the data within the file and provide a Transaction Acknowledgement back to the submitter indicating whether the file passed data validation or not.

Figure 16. Deemed STTM Distribution System Allocation – Activity Diagram

4.1.41 Deemed STTM Distribution System Allocation Transaction Definition

Interface type	FileType Descriptor	Priority	Data type	From	To	Comments
File	NAD, NAU, NAF, NAP, NAR	Low	CSV	Pipeline Operator	AEMO	

File header fields are to be set as per the following table:

Table 17 Deemed STTM Distribution System Allocation fields

Field name	M/O/NR	Field value / example
gasdate	M	2009-02-15
participantidentifier	M	user_84
networkidentifier	M	NETYBRI4
quantity	M	50000000.000000000

4.1.42 Examples

```
gasdate,participantidentifier,networkidentifier,quantity
2009-02-24,user_84, NETYBRI4,50000000.000000000
```

Pipeline CTM Data

The activity diagram below shows the activity flow that follows a submission of CTM Data by the Pipeline Operator to the AEMO STTM systems. Upon receipt of the transaction file, the STTM systems will perform primary validation (file name) and provide a Message Acknowledgment back to the submitter indicating that the file is valid or that it is in error. If the file is found to be invalid during primary validation, no further action is taken by the STTM system. If the file is found to be valid during the primary validation, the STTM system will proceed to validate the data within the file and provide a Transaction Acknowledgement back to the submitter indicating whether the file passed data validation or not.
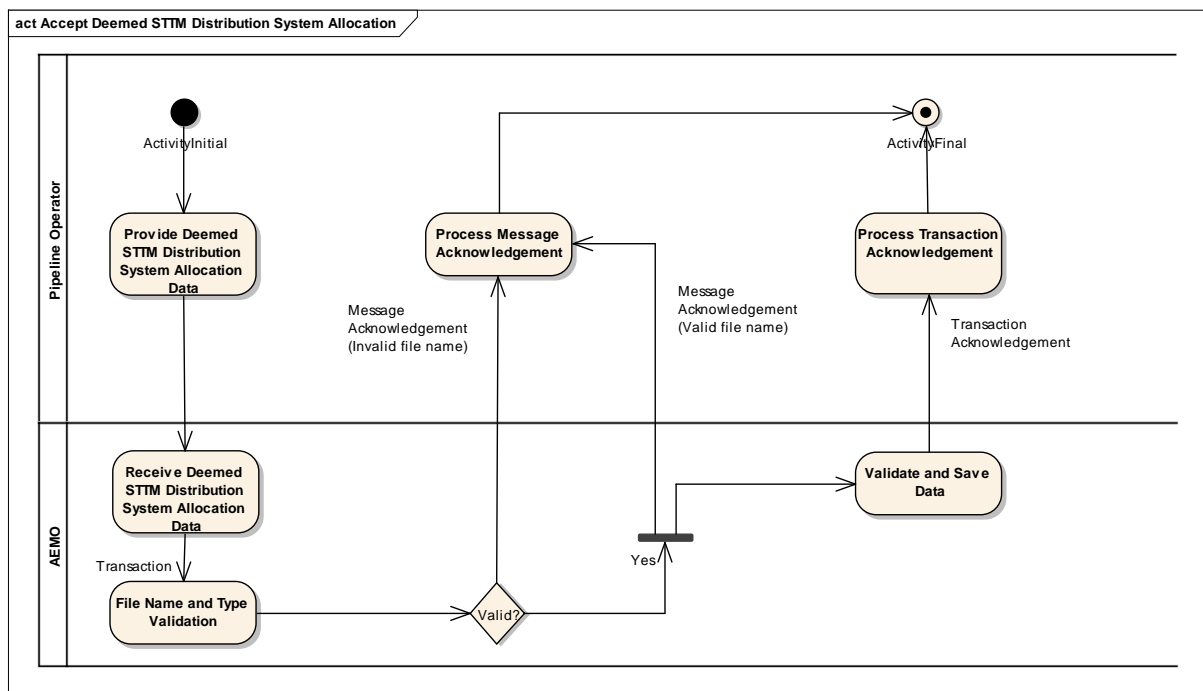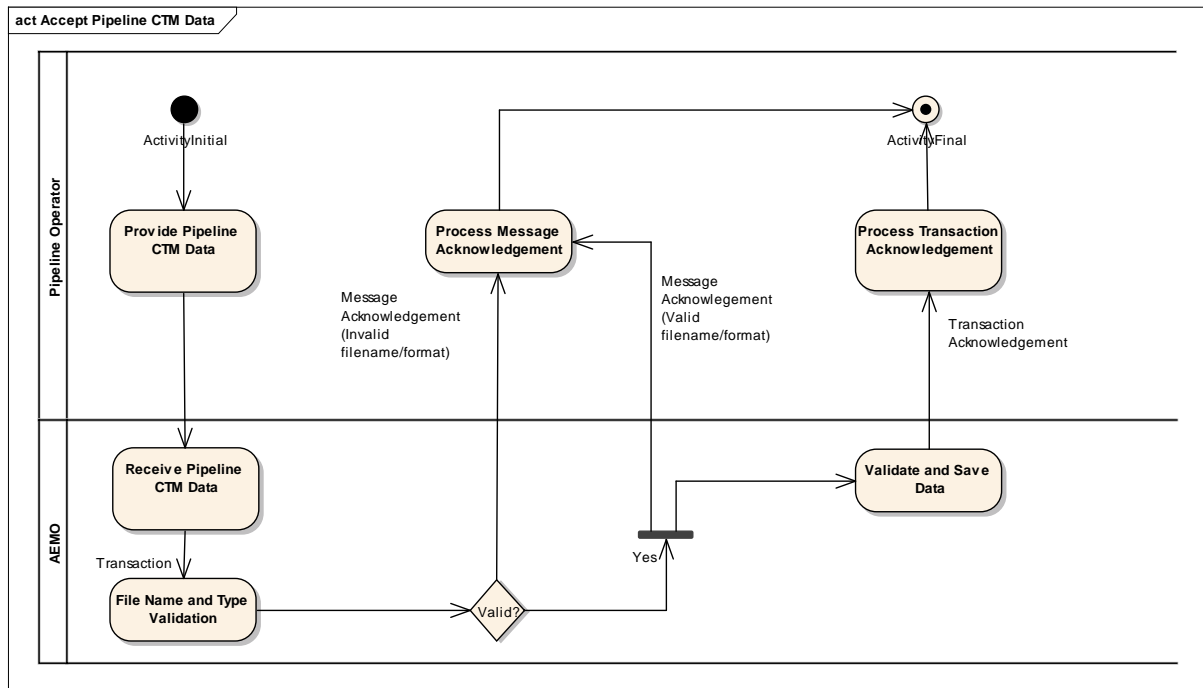

Figure 17. Pipeline CTM Data – Activity Diagram

4.1.43 Pipeline CTM Data Transaction Definition

Interface type	FileType Descriptor	Priority	Data type	From	To	Comments
File	CTD, CTU, CTF, CTP, CTR	Low	CSV	Pipeline Operator	AEMO	

File header fields are to be set as per the following table:

Table 18 Pipeline CTM data fields

Field name	M/O/NR	Field value / example
mirn	M	5410023885
gasdate	M	2009-02-15
consumedenergygj	M	123456.000000000
qualityid	O	205

4.1.44 Examples

mirn,gasdate,consumedenergygj,qualityid

5410023885,2009-02-24,123456.000000000,205

Message Acknowledgement

AEMO shall send a message acknowledgement for every message it receives. The Message Identifier component of the file name will be filled in with the Message Id of the message submitted. This would facilitate better traceability between the submitted message and corresponding acknowledgement (InitiatingMessageId). In the unlikely event of a file being submitted with a blank or invalid Message Identifier component, AEMO ReceiptId will be used instead.

The information in the file describes whether or not the file submitted conforms to specifications.

4.1.45 Message Acknowledgement Definition

Interface type	FileType Descriptor	Priority	Data type	From	To	Comments
File	MCK	Low	CSV	AEMO	Participants	

File header fields are to be set as per following table:

Table 19 Message Acknowledgement fields

Field name	M/O/NR	Field value / example
initiatingmessageid	M	ABCD-1234
receiptid	M	AEMO-ACK-1234
receiptdatetime	M	2009-02-15T06:47:05
status	M	Reject
duplicatestatus	M	N
eventseverity	O	Error
eventcode	O	4100
eventcodedescription	O	Invalid filename – File name provided does not comply with the naming convention
eventcontext	O	Invalid filename – File name provided does not comply with the naming convention

4.1.46 Examples

Message Acknowledgement without event will have only one line of data where as Acknowledgement with events will have one or more lines of data in it (this excludes the header line).

Message Acknowledgement for initiating transaction ABCD-1234 with event:

initiatingmessageid,receiptid,receiptdatetime,status,duplicatestatus,eventseverity,   eventcode, eventcodedescription, eventcontext
ABCD-1234,AEMO-ACK-1234,2009-02-15T06:47:05,Reject,N,Error,4100,Invalid filename – File name provided does not comply with the naming convention, File type must be of the type detailed in the build pack

Message Acknowledgement for initiating transaction ABCD-1234 without event:

initiatingmessageid,receiptid,receiptdatetime,status,duplicatestatus,eventseverity,   eventcode, eventcodedescription, eventcontext
ABCD-1234,AEMO-ACK-1234,2009-02-15T06 :47 :05,Accept,N,,,,

Transaction Acknowledgement

Transaction Acknowledgement describes validation details of the data submitted. Message Identifier component of the file name will be filled in with the Message Id of the Message submitted (InitiatingMessageId). This would facilitate better traceability between the submitted message and corresponding acknowledgement.

4.1.47 Transaction Acknowledgement Definition

Interface type	FileType Descriptor	Priority	Data type	From	To	Comments
File	ACK	Low	CSV	AEMO	Participants	

File header fields are to be set as per following table:

Table 20 Transaction Acknowledgement fields

Field name	M/O/NR	Field value / example
initiatingmessageid	M	ABCD-1235
receiptid	M	AEMO-ACK-1235
receiptdatetime	M	2009-02-16T06:47:05
status	M	Reject
duplicatestatus	M	N
eventseverity	O	Error
eventcode	O	4100
eventcodedescription	O	TRN not provided for the bid
eventcontext	O	TRN not provided for the bid

4.1.48 Examples

Transaction Acknowledgement without event will have only one line of data where as Acknowledgement with events will have one or more lines of data in it (this excludes the header line).

Transaction Acknowledgement for initiating transaction ABCD-1234 with event:

```
initiatingmessageid,receiptid,receiptdatetime,status,duplicatestatus,eventseverity,          eventcode,
eventcodedescription, eventcontext
ABCD-1234,AEMO-ACK-1234,2009-02-15T06:47:05,Reject,N,Error, 4300, TRN not provided for the offer,
TRN not provided for the offer. This is a mandatory Field.
```

Transaction Acknowledgement for initiating transaction ABCD-1234 without event:

```
initiatingmessageid,receiptid,receiptdatetime,status,duplicatestatus,eventseverity,          eventcode,
eventcodedescription, eventcontext
ABCD-1234,AEMO-ACK-1234,2009-02-15T06 :47 :05,Accept,N,,,,
```

Transaction Summary Table

The upload CSV file screen in S-WEX provides details of successful or failed file uploads in a transaction summary table. Accept/Reject/Warning for a submission will be shown both at ACK/MCK level, but if a file submission fails at MCK level, transaction summary will not display ACK level acknowledgement. Market Participant can view error and warning details by clicking on the icon next to the submission within the transaction summary table.

The following information will be displayed within the transaction summary table:

Table 21 Transaction SUMMARY Table fields

Field name	M/O/NR	Field value / example
Filename	M	STTM_64_13_FHC_20100301094846_SE_1267436926_652_1.CSV
Type	M	ACK
Status	M	Warning
Submitted on	M	12:13:19

The following information will be displayed in a message window when Market Participant chooses to display error and warning associated with ACK or MCK from the transaction summary table:

Table 22 ACK/MCK message window fields

Field name	M/O/NR	Field value / example
Event Code	M	4653
Event Description	M	Facility allocations do not sum to STTM withdrawal zone CTM data plus Transmission Connected STTM User (TCSU) allocations
Event Context	M	Submitted allocations for (RBP 2011-09-26)->(177466) do not equal stored allocations: (177464.181800000)

Error Handling

S-WEX captures any error encountered while processing the transactions and these will be used in describing the error conditions in the transaction acknowledgement files as well as acknowledgement files.

Error Codes

Table 23 Error code and description

Error Code	Error Description
Global codes	
3999	Unknown Error
4000	Internal System Error
4001	Data not found – the record you have attempted to locate does not exist

4002	Invalid date format – Please provide date in YYYY-MM-DD format
4003	Invalid commencement date – Commencement date is before the submission date
4004	Invalid termination date – Termination date is earlier than the commencement date
4005	Invalid market participant id – the submitted market participant ID does not match the submitter's participant ID.
4006	The dataset is incomplete
4007	The supplied file is not in CSV format
4008	Data provided does not conform to specification detailed in participant build pack

File processing codes	
4100	Invalid filename – File name provided does not comply with the naming convention
4101	Duplicate transaction ID detected
4102	Unexpected character detected
4103	Duplicate file name detected
4104	Invalid sender company
4105	Invalid recipient company
4106	Invalid timestamp format has been provided with file name
4107	Invalid market identifier
4108	Invalid File type descriptor
4109	Row number in filename does not match number of data rows in file

Ex Ante Bid specific codes (4200 – 4299)	
4200	TRN not provided for the Ex Ante Bid
4201	Invalid TRN for the Ex Ante Bid
4202	Commencement date not provided for the Ex Ante Bid
4203	Termination date not provided for the Ex Ante Bid
4204	Commencement date must be greater than the submission date for the Ex Ante Bid
4205	Submission Time has exceeded the permitted time limit for the Ex Ante Bid
4206	TRN not effective for the Ex Ante Bid period
4207	Ex Ante Bid must have at least one price-quantity step
4208	There must be no gaps in Ex Ante Bid price-quantity steps
4209	The Ex Ante Bid quantity gas values must be >=0 with no decimal places
4210	The Ex Ante Bid cumulative quantity must increase with the number of the bid step
4211	The Ex Ante Bid cumulative quantity must be less than or equal to the Capacity Limit less the Price Taker Bid quantity for that TRN for that gas date
4212	Ex Ante Bid price must decrease with increasing bid quantity
4213	Ex Ante Bid price must have 4 decimal places
4214	Ex Ante Bids must be submitted by Trading Participants holding a valid STTM Role
4215	The Ex Ante Gas Bid price must be >= Minimum Market Price and <= the Market Price Cap (MPC)

4216	Trading Participant who is suspended as STTM User at a hub must not submit Ex Ante Bids at that hub.
4217	Trading Participant who is suspended as STTM Shipper at a hub must not submit Ex Ante Bids on a Facility associated with that hub.

Ex Ante Offer specific codes (4300 - 4399)

4300	TRN not provided for the Ex Ante Offer
4301	Invalid TRN for the Ex Ante Offer
4302	Commencement date not provided for the Ex Ante Offer
4303	Termination date not provided for the Ex Ante Offer
4304	Commencement date must be greater than the submission date for the Ex Ante Offer
4305	Submission time has exceeded the permitted time limit for the Ex Ante Offer
4306	TRN not effective for the Ex Ante Offer period
4307	Ex Ante Offer must have at least one price-quantity step
4308	There must be no gaps in Ex Ante Offer price-quantity steps
4309	The Ex Ante Offer gas quantity values must be >=0 with no decimal places
4310	The Ex Ante Offer cumulative quantity must increase with the number of the offer step
4311	The Ex Ante Offer cumulative offer quantity must be less than or equal to the Capacity Limit for that TRN for that gas date
4312	Ex Ante Offer price must increase with increasing offer quantity
4313	Ex Ante Offer price must have 4 decimal places
4314	The Ex Ante Gas Offer price must be >= Minimum Market Price and <= the Market Price Cap (MPC)
4315	Ex Ante Offers must be submitted by Trading Participants holding a valid STTM Role

Price Taker Bid codes (4400 – 4499)

4401	TRN not provided for the Price Taker Bid
4402	Invalid TRN for the Price Taker Bid
4403	Commencement date not provided for the Price Taker Bid
4404	Commencement date must be greater than the submission date for the Price Taker Bid
4405	Submission Time has exceeded the permitted time limit for the Price Taker Bid
4406	TRN not effective for the Price Taker Bid period
4407	The gas quantity values must be >=0 with no decimal places for Price Taker Bid
4408	Quantity must not exceed the Trading Right Capacity of the nominated Trading Right (referred to by the TRN in the submission) LESS the maximum step quantity for the most recently submitted ex ante bid for the same gas day and Trading Right.

Market Schedule Variation (4500 – 4599)

4500	Invalid MSV – Submitter must be a registered STTM Trading Participant
4501	Invalid MSV – Valid Submitter type (shipper from the hub; shipper to the hub or network user) must be supplied
4502	Invalid MSV – Valid Submitter facility ID must be supplied

4503	Invalid MSV – Valid Gas date must be supplied
4504	Invalid MSV – Valid Counter-party ID must be supplied
4505	Invalid MSV – Valid Counter-party type must be supplied
4506	Invalid MSV – Valid Counter-party facility ID not provided for Market Schedule Variation where the originator is a 'shipper to the hub' and the recipient type is 'shipper from the hub'
4507	Invalid MSV – Quantity (GJ) must be of type numeric (18,9)
4508	Invalid MSV – MSV type must be 'I' increase or 'D' decrease
4509	Invalid MSV – the Submitter Type is 'shipper from the hub', but the Submitter ID is not registered in the STTM as 'Shipper'' at the hub associated with the Submitter Facility.
4510	Invalid MSV – the Submitter Type is 'shipper to the hub', but the Submitter ID is not registered in the STTM as 'Shipper'' at the hub associated with the Submitter Facility.
4511	Invalid MSV – the Submitter Type is 'shipper from the hub' and the counter-party is a 'shipper from the hub' and the quantity is negative
4512	Invalid MSV – the Submitter Type is 'shipper from the hub' and the counter party is a 'shipper to the hub'
4513	Invalid MSV – the Submitter Type is 'shipper to the hub' and the counter party is a 'shipper to the hub' and the quantity is negative
4514	Invalid MSV – the Counter-Party is not registered in the STTM as the submitted counter-party type
4515	Invalid MSV – the submission date time for the MSV is outside of the allowed submission window
4516	The STTM Hub associated with the MSV submission is invalid
4517	System error – MSV Transaction is not valid
4518	Invalid MSV confirmation – No matching MSV record found
4519	Invalid MSV confirmation – Confirmer must be the Counterparty
4520	Invalid msvstatus – msvstatus must be 'CONFIRM' or 'REJECT
4521	Invalid MSV – the Submitter Type is 'network user', but Submitter ID is not registered in the STTM as 'network user' at the hub associated with the Submitter Facility.
4522	Invalid MSV – the MSV Type for Submitter must be 'Increase' when both Submitter and Counter Party Type are 'network user'
4523	Invalid MSV – the Counter Party Type must be 'network user' when Submitter Type is 'network user'
4524	Invalid MSV – the Submitter Facility must be a network facility when Submitter Type is 'network user'
4525	Invalid MSV – for a user to user MSV the Counter Party Facility must be either NULL or same as the Submitter Facility
4526	Invalid MSV – user to user MSV functionality is not yet activated
Allocation codes (4600 – 4699)	
4600	The data provider has not been configured in the system as the provider of the submitted data
4601	The allocation file does not contain allocation for every Trading Participant who holds a Registered Facility Service with the submitting STTM Pipeline Operator
4602	The Registered Facility Service Allocation file is not associated with a Registered Facility Service that is active for the gas date for which the allocation data is submitted
4603	The Registered Facility Service Allocation file does not contain allocation data for every

4604	The Registered Facility Service Allocation file contains data for trading rights that are not active for the gas date for which the allocation data is submitted *Note: This error is also returned in cases where the participant submitting the allocation data is not an authorised Allocation Agent for that data.*
4605	The sum of the quantities for a gas date against each trading right in the Registered Facility Service Allocation file must match that of the associated Registered Facility Service
4606	The MOS stack/step identifier is not valid
4607	The total MOS step quantity does not match total MOS allocation quantity
4608	The MOS step allocation quantity cannot be less than zero
4609	The MOS step allocation file must only contain data for one gas day
4610	The MOS step allocation quantity cannot exceed the MOS stack step quantity
4611	All mandatory fields for the Allocation files must be provided
4612	The Gas Date must be a valid date in YYYY-MM-DD format
4613	The Gas Date must be a past gas date
4614	Allocation quantity data must be >= 0
4615	The company submitting the allocation data must be an active STTM participant for each gas date for which allocation data is submitted by the company
4616	FacilityId of the allocation data records must match the Facility ID of an STTM facility that is active for each gas date for which allocation data is submitted against that Facility or the Allocation Agent
4617	Company submitting allocation data must be the Allocation Agent for the Facility
4618	CRN of the allocation data records must match the CRN of an STTM Registered Facility Service that is valid for each gas date for which allocation data is submitted against that CRN
4619	NA
4620	Facility Allocation file must supply the complete set of CRNs that are valid for the gas day on the facility
4621	Duplicate MOS Step Allocation records for a gas day in file
4622	Unused MOS Step Id in MOS Step Allocation file
4623	Missing Trading Participant Registered Service for MOS Step Allocation
4624	Missing Trading Participant Registered Service Allocations for MOS Step Allocation
4625	The STTM Hub associated with the MOS Step Allocation is invalid
4626	System error – MOS Step Allocation Transaction is not valid
4627	There are duplicate Distribution System Allocation records for a gas day and STTM Hub in the allocation file
4628	Multiple Registered Distribution Services exist for an STTM User at an STTM Hub for a gas day
4629	The STTM Hub associated with the Distribution System Allocation is invalid
4630	System error – Distribution System Allocation Transaction is not valid
4631	Duplicate Facility Allocation records for a gas day in file
4632	Total MOS and Overrun MOS in Facility Allocation record must have the same sign
4633	Absolute value of Total MOS must be >= absolute value of Overrun MOS in Facility Allocation record
4634	The STTM Hub associated with the Facility Allocation is invalid

4635	System error – Facility Allocation Transaction is not valid
4636	Duplicate Registered Facility Service Allocation records for a gas day in file
4637	Registered Facility Service Allocation file does not contain allocations for all valid Trading Rights for the Registered Facility Service
4638	Registered Facility Service Allocation file contains duplicate allocations for a Trading Right
4639	The STTM Hub associated with the Registered Facility Service Allocation is invalid
4640	System error – Registered Facility Service Allocation Transaction is not valid
4641	There is no matching Distribution System Service associated with the non zero allocation for the gas day and hub of the allocation
4642	Allocation file for an STTM Hub must contain data for all Distribution System Services on that Distribution System that are active for each gas day for which allocation data is submitted.
4643	The MOS Stack indicates a discrepancy in the flow direction when compared to MOS quantities on the Facility Allocation.
4644	MOS has been incorrectly allocated to a shipper who is not a valid MOS provider for the facility and gas day.
4645	Total Facility Allocation exceeds the registered maximum hub capacity of the Facility.
4646	Invalid STTM User
4647	Invalid MIRN
4648	Consumed energy value must be greater than or equal to 0
4649	Invalid Quality Identifier
4650	Missing MIRN, CTM data must be provided for all STTM CTMs
4651	CTM value greater than threshold limit for MIRN
4652	CTM value less than threshold limit for MIRN
4653	Facility allocations do not sum to STTM withdrawal zone CTM data plus Transmission Connected STTM User (TCSU) allocations
4654	Total Facility Allocation exceeds the upper warning limit of the Facility
4655	Total Facility Allocation is lower than the lower warning limit of the Facility
4656	Facility Allocation file with File Type Descriptor PAD can only include data for one facility
4657	Facility Allocation file with File Type Descriptor PAD can only include data for one gas day
4658	Facility Allocation files with File Type Descriptor PAU, PAP, PAF and PAR can only be submitted on and after D+2 for gas date D
4659*	Facility Allocation files with File Type Descriptor PAD can only include D+1 data for gas date D
Contingency Gas Bids and Offers codes (4700 – 4749)	
4700	Facility ID is mandatory for Contingency Gas Bid/Offer
4701	From and To dates are mandatory for Contingency Gas Bid/Offer
4702	From date must be greater than the submission date for the Contingency Gas Bid/Offer
4703	The Contingency Gas Bids/Offers must be submitted before the Contingency Gas Bids/Offers cut off time
4704	The Contingency Gas Bid/Offer must be associated with a valid flow direction
4706	Contingency Gas Bids and offers must contain at least one price-quantity step
4707	There must be no gaps in Contingency Gas Bid/Offer price-quantity steps

4708	The Contingency Gas quantity values must be >=0 with no decimal places
4709	Contingency Gas Bid quantity must **increase** with the number of the bid step
4711	Contingency Gas Offer quantity must **increase** with the number of the offer step
4713	The Contingency Gas Bid/Offer price must be >= Minimum Market Price and <= the Market Price Cap (MPC)
4714	Contingency Gas Prices will be entered in dollars with up to 4 decimal points
4715	Contingency Gas Bid Price must **decrease** with increasing bid quantity
4716	Contingency Gas Offer Price must **increase** with increasing offer quantity
4717	Trading Participant who is suspended as STTM User at a hub must not submit Contingency Bids at that hub.
4718	Trading Participant who is suspended as STTM Shipper at a hub must not submit Contingency Bids on a Facility associated with that hub.
MOS Offers codes (4750 – 4799)	
4750	Facility ID is mandatory for MOS Offer
4751	MOS period is mandatory for MOS Offer
4753	The MOS Offer must be submitted before the MOS Offer cut off time for the MOS Period
4754	MOS Type must be 'I' (Increase) or 'D' (Decrease)
4756	MOS offers must contain at least one price-quantity-trn step
4757	There must be no gaps in MOS Offer price-quantity-trn steps
4758	The MOS quantity values must be >=0 with no decimal places
4759	MOS Offer price must **increase** with the number of the offer step
4760	MOS period must be for a future monthly MOS Period
4761	The MOS Offer price must be >= Minimum Market Price and <= the MOS Price Cap (MOSCC)
4762	MOS Offer price must be >=0 with up to 4 decimal places
4763	Facility must be a valid Pipeline
4765	MOS offer contains trading rights for multiple pipelines
4766	The effective date range of TRN TRxxxxxxxxxx does not overlap the entire MOS Period date range.
4767	TRN TRxxxxxxxxxx is not an active MOS enabled trading right for every gas day in the MOS Period.
4768	Trading Participant who is suspended as STTM Shipper at a hub must not submit a Decrease MOS Offer at that hub.
4769	MOS period must be in Mmm-YYYY format
4770	Invalid TRN for the MOS Offer
Facility Hub Capacity codes (4800 – 4899)	
4800	All mandatory fields for the STTM FACILITY HUB CAPACITY file (File type descriptor of 'FHC') must be provided
4801	Facility Hub Capacity gas date cannot be in the past
4802	FacilityHubCapacity must be >= 0
4803	FacilityHubCapacity must be <= maximum capacity of the Facility

4804	The Company submitting the capacity data must be an active STTM participant for each gas date for which capacity data is submitted by the company
4805	The FacilityId of the capacity data records must match the FacilityID of an STTM facility that is active for each gas date for which capacity data is submitted against that Facility
4806	The Company submitting the capacity data must be the STTM Pipeline Operator for the FacilityId
4807	The Facility Hub capacity must be submitted before the Facility Hub capacity cut off time for the D - 1 schedule
4808	All quantities must be specified in GJs with no decimal places
4809	FacilityHubCapacity exceeds the high capacity threshold of the Facility
4810	FacilityHubCapacity is lower than the low capacity threshold of the Facility
4811	New Facility Hub Capacity data for the D-1 schedule cannot be submitted between the first and second cutoff time – Facility Hub Capacity data for the D-1 schedule is received and is valid
4812	New Facility Hub Capacity data for the D-1 schedule cannot be submitted between the first and second cutoff time – Data Confirmation file is received and Facility Hub Capacity data for the D-1 schedule is confirmed
4813	Facility Hub Capacity file can only include data for one facility
4814	NA
4815	NA
Data Confirmation codes (4900 – 4999)	
4900	No matching successful submission found
4901	File type descriptor must match the file type descriptor for the matching record found
4902	NA
4903	Submission date of the data confirmation file must be the same as the submission date of the data file of the matching record file
4904	The data confirmation file must only contain one transaction to confirm
4905	The data confirmation file can only confirm the most recent transaction received
4906	Data confirmation file must be submitted before the second cutoff time
4907	New Data Confirmation file cannot be submitted between the first and second cutoff time – Facility Hub Capacity data for the D-1 schedule is received and is valid
4908	New Data Confirmation file cannot be submitted between the first and second cutoff time – Data Confirmation file is received and Facility Hub Capacity data for the D-1 schedule is confirmed
4909	New Data Confirmation file cannot be submitted between the first and second cutoff time – Facility Allocation file is received and is valid
4910	New Data Confirmation file cannot be submitted between the first and second cutoff time – Data Confirmation file is received and Facility Allocation Transaction is confirmed
4911	Default allocation data has been applied - the data confirmation file can no longer be used. You will need to resubmit a PAD file

Note: SWEXIE will accept transactions that contain more fields than the number of fields specified in the transaction definition for the transaction type submitted, without generating an error message. However any additional fields beyond those specified in the transaction definition will be ignored and not saved to the database. Note that SWEXIE will reject a transaction if the number of header fields does not match the number and order specified in the transaction definition.

For example, in the following Price Taker Bid transaction SWEXIE would accept the transaction and automatically save the first three values only. The additional 'quantity' field would be ignored:

gasdate,trn,quantity,quantity

2009-02-12,ABCD123456,10000,20000

In the following example, the Price Taker Bid transaction would be rejected due to the missing data for the additional 'quantity' field:

gasdate,trn,quantity,quantity

2009-02-12,ABCD123456,10000

* Note:

Error code 4659: Error message in the ACK file "gas date for daily file is not D-1" is incorrect and will be fixed in Gas Release 35.