



INDEPENDENT
MARKET
OPERATOR



WEMS 3.12 Release Notes

(Build 3.12-913-9)

21 September 2015

Document control

Author

Function	Name
Business Analyst	Winston Cheng

Document approval

Function	Name
Martin Maticka	Group Manager, Operations and Technology

Change history

Version	Date	Revision Description	Changed By
1.0	07/06/2015	Document creation	Winston Cheng
1.1	14/08/2015	Updates to other changes section and inclusion of WEMS-6007 and WEMS-5863.	Winston Cheng
1.2	28/08/2015	Update build number and minor changes to settlement web service description	Winston Cheng
1.3	21/09/2015	Included notice section under Section 2.	Winston Cheng

Contents

Terms, abbreviations and acronyms.....	4
1. Introduction	5
2. New features	5
3. Resolved issues	8
4. Other changes	12
Appendix 1: Sample invoice.....	15
Appendix 2: Adjustment number issues.....	19

Terms, abbreviations and acronyms

Name of Abbreviation/Acronym/Term	Description or Meaning
ASCII	American Standard Code for Information Interchange
CSV	Comma Separated Value
HTTP	Hypertext Transfer Protocol
IRCR	Individual Reserve Capacity Requirement
JSON	JavaScript Object Notation
MW	Mega Watt
MW@41	Mega Watt capability at 41 degrees Celsius
MWh	Mega Watt Hours
MPI	Market Participant Interface
NDL	Non Dispatchable Load
PIR	Participant Information Report
URL	Uniform Resource Locator
WEMS	Wholesale Electricity Market System

1. Introduction

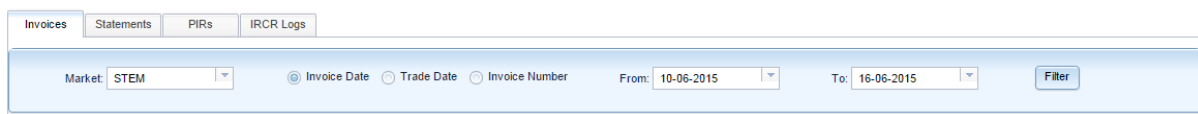
These are the release notes for WEMS 3.12 (Build 3.12-913-9).

2. New features

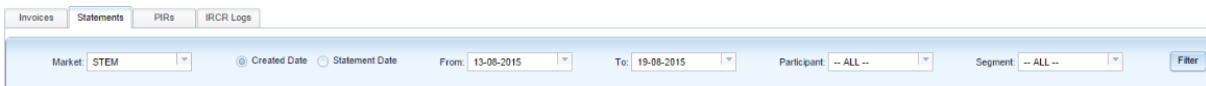
Settlement Portal – WEMS-5638

A new settlements portal accessible from the Settlements menu in the MPI will allow Market Participants to access their invoices, statements, PIRs and IRCR logs. The new display provides a simple and intuitive interface which allows for the following filtering options:

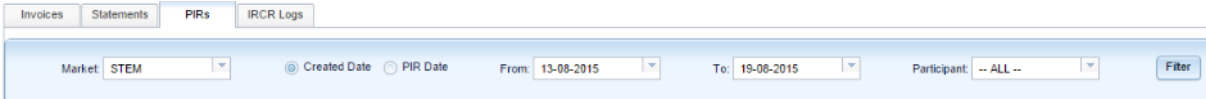
Invoices:



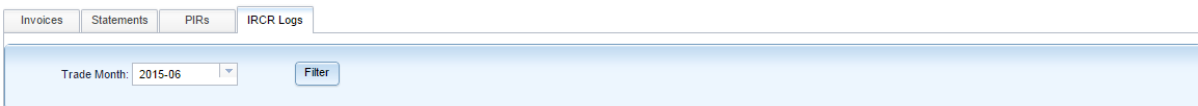
Statements:



PIRs:



IRCR Logs:



The above information is also available through a web service. Invoices, statements, PIRs and IRCR logs are accessible via HTTP via the GET method. All data returned that is not file content data is in JSON format.

Please note that these requests can only be made with a valid web service certificate.

URLs for accessing settlement files share a common base URL. The base URL is <https://hostname/mpi/ws/rest/v1/settlement>, where the hostname is:

- **Live:** wems.imowa.com.au
- **Trial:** wems-pte1.imowa.com.au

For more information in relation to this web service, please refer to the WEMS Report Specification document available at:

<http://www.imowa.com.au/docs/default-source/wems/wems-report-specification-v1-0.pdf>.

Please note that invoices relating to settlement runs conducted prior to the release of 3.12 will only be available in XML. If you require a printable version, please ensure you save a copy of the invoices prior to the deployment of 3.12.

All invoices for settlement runs completed after the deployment of WEMS 3.12 will be available in JSON and PDF formats.

Please note:

- Users are unable to identify the adjustment number for PIR and Statements in the MPI. Users accessing through web services will be able to see the adjustment number (see screenshots in Appendix 2). This feature will be available in the next WEMS patch release (WEMS-6057).
- At present, only the latest adjustment for a trading month is available through the MPI and web service. The ability to view and request PIR, Invoice and Statements by adjustment number will be implemented in the next WEMS patch release (WEMS-6062).

Invoice changes

Settlement invoices will feature a new layout and design in WEMS 3.12. A sample of the new invoice is available in Appendix 1.

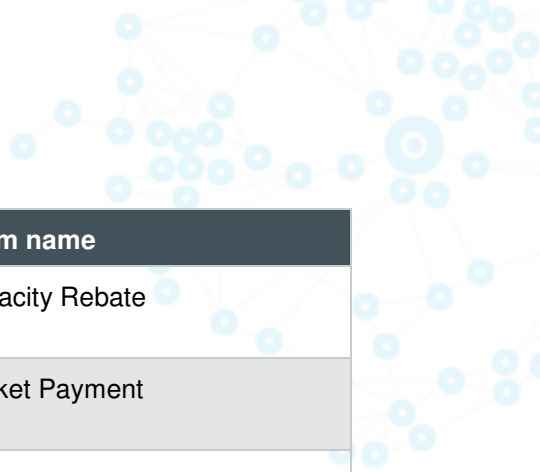
The invoice has been split into four sections which include:

- Payment Summary;
- Receipt Created Tax Invoice;
- Tax Invoice; and
- Adjustment Information (if applicable);

Quantities have also been removed from the invoices. If this value is still required, it is available on the relevant Statement and PIR.

Please note that some of the billing line item names have also changed on the invoice. The table below summarises these changes.

Old billing line item name	New billing line item name
Ancillary Service Provider Settlement Amount Supply	Contracted Ancillary Service - Supply
Ancillary Service Settlement Amount Demand	Ancillary Service - Demand
Balancing Demand Amount	Balancing Market - Demand
Balancing Supply Amount	Balancing Market - Supply
Constrained Off Compensation Amount	Constrained Off Compensation
Constrained On Compensation Amount	Constrained On Compensation



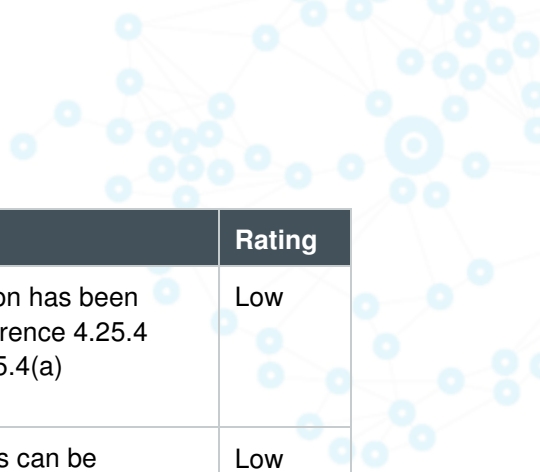
Old billing line item name	New billing line item name
Reserve Capacity LFR Market Customer Rebate	Load Following Capacity Rebate
Participant Load Following Ancillary Service Market Payment Supply	Load Following Market Payment
Market Participant Market Fee Settlement Amount	Market Operator Fee
Market Participant Regulator Fee Settlement Amount	Market Regulator Fee
Market Fees Settlement Balance Amount for Regulator Fees	Market Regulator Fee Settlement
Non-Balancing Facility Dispatch Instruction Payment	Non-Balancing Facility Dispatch Payment
Outage Compensation Settlement Amount for Demand	Outage Compensation - Demand
Outage Compensation Settlement Amount for Supply	Outage Compensation - Supply
Reconciliation Settlement Amount Demand	Reconciliation Settlement - Demand
Reconciliation Settlement Amount for Supply	Reconciliation Settlement - Supply
Reserve Capacity Refund Market Customer Rebate	Reserve Capacity Refund Rebate
Reserve Capacity Refund Settlement Amount for Demand	Reserve Capacity Refund
Reserve Capacity Security Market Customer Rebate	Reserve Capacity Security Market Customer Rebate
Reserve Capacity Settlement Amount for Demand	Reserve Capacity Market - Demand
Reserve Capacity Settlement Amount for Supply	Reserve Capacity Market - Supply
Reserve Capacity Supplementary Capacity Security Offset	Reserve Capacity Supplementary Capacity Security Offset
Verve Energy AS Provider Payment Supply	Synergy Ancillary Service - Supply
Market Participant System Operation Fee Settlement Amount	System Operation Fee
Market Fees Settlement Balance Amount for System Fees	System Operation Fee Settlement
Short Term Energy Market (STEM) Settlement Amount Demand	Short Term Energy Market - Demand
Short Term Energy Market (STEM) Settlement Amount Supply	Short Term Energy Market - Supply

3. Resolved issues

Ref.	Description	Comment	Rating
WEMS-5616	Load Forecast and Real Time Data charts in the MPI have incorrectly labelled Y-axis.	Y-axis has been change from MWh to MW.	Low
WEMS-5596	Change Request summary page in the MPI orders change requests from oldest to newest.	Change request ordering has been updated to display the newest change requests first.	Low
WEMS-5556	A number of change request workflows in the MPI were misaligned with the market rules in relation to whether the IMO either accepts or approves submissions.	In most instances in the rules, the IMO accepts information submitted by participants. The only two change request workflows which require IMO's approval are Facility Aggregation and Exemption from Funding Spinning Reserve.	Low
WEMS-5637	The copy function within Standing Data change request screen copies all fields including the Supporting Evidence Comments. This fields should not be copied as it is only relevant to a particular change request.	Copy feature has been updated to exclude this field. This will need to be manually populated with each new change request.	Low
WEMS-5635	The search parameters in the change request history and change request pending approvals pages are not maintained after the initial search.	Search parameters are now maintained while in the same workflow.	Low
WEMS-5417	When viewing change request history, it is difficult to ascertain what information was changed in that particular request. In addition, the change request history page in the MPI does not include information relating to who and when it was processed.	When viewing historic change requests, the display now shows the previous effective data along with the data applicable to the change request being viewed. Change request history page in the MPI includes 'Processed by' and 'Date Processed' columns.	Low
WEMS-5634	MPI Registration change request search parameters in the drop down menus are not alphabetically ordered.	All search options with drop down menus are now alphabetically ordered.	Low
WEMS-5569	Market Participants' withdraw function in the Facility Standing Data change request workflow was not working.	Functionality has been fixed to ensure Market Participant are able to withdraw their change request.	Low

Ref.	Description	Comment	Rating
WEMS-5794	ASCII characters in the change request comment fields were being converted to other characters.	ASCII characters included in change request comment fields are stored as entered throughout workflow	Low
WEMS-5557	NDL Contract Termination and NDL Association Reduction change requests are unable to be viewed after they have been processed by the IMO.	Processed NDL Contract Termination and NDL Association Reduction change requests can be viewed in the MPI.	Low
WEMS-4871	Dispatchable load standing data change request screen contained typographical error within Appendix 1.i.(xi) description	Typographical error has been fixed (beofre → before)	Low
WEMS-5482	MPI User guide available from the Help menu in the MPI has been updated.	N/A	Low
WEMS-5673	Users were not able to identify when WEMS was unavailable due to an upgrade, failover or system issue.	The following messages are provided when a user attempts to access WEMS during a system outage: - MPI: <i>'The service is unavailable'</i> Web service reports and submissions: <i>'503 Site is down for maintenance'</i>	Low
WEMS-1701	Balancing Data was required to be submitted within the resource plans pre 1 July 2012. Despite this information not being required since this date, File Exchange screens still display an option to upload this file.	The File Exchange CSV option for Balancing Data has been removed from the MPI.	Low
WEMS-5862	Relevant Demand MPI report displaying dates inconsistently.	Date format has been updated from DD-MMM-YYYY to dd/mm/yyyy (i.e. from 01-Jan-2015 to 01/01/2015)	Low

Ref.	Description	Comment	Rating
WEMS-5863	The date/time fields were inconsistently represented in the Reserve Capacity Certification CSV report available through the MPI. The affected fields include: 1. Full Capacity Obligation Date 2. Project Approval Date 3. Project Financing Date 4. Project Site Preparation Date 5. Project Construction Start Date 6. Equipment Installation Date 7. Commissioning Trials Date 8. Decommission Date	Date/time fields in the CSV reserve capacity report have been standardised such that: • Fields with time component should use the format "dd/MM/yyyy HH:ss" (eg 06/05/2015 13:07) • Fields without time component should use the format "dd/MM/yyyy" (eg 06/05/2015) • Fields representing a trading month should use the format "MM/yyyy" (eg 05/2015)	Low
WEMS-6007	The Reserve Capacity Certification report incorrectly provides the report extraction date by default if no date is applicable for the following fields: 1. Project Approval Date 2. Project Financing Date 3. Project Site Preparation Date 4. Project Construction Start Date 5. Equipment Installation Date 6. Commissioning Trials Date	Where no date has been submitted for any of the fields described, the fields will not be populated with a default value and will remain empty in the report.	Low
WEMS-4768	Market Messages for Market Participants Monthly Credits report referencing incorrect capacity year.	Market Message report has been updated to ensure that the information contained within publication notification is correct.	Low
WEMS-374	The information provided in the Market Messages report was inconsistent between different reports.	Market messages have been updated to include the trading day, report name, report type and message code associated with each report defined by https://wems.imowa.com.au/mpi/ws/reports/v6?wsdl	Medium
WEMS-383	Reserve Capacity testing email to market participants refers to the highest MW@41 value even when the test is conducted by System Management	Reserve Capacity testing email has been updated to display the average over an hour where System Management has conducted the test	Low



	Ref.	Description	Comment	Rating
	WEMS-5780	Reserve Capacity test notifications were referencing the incorrect rule where the facility failed the test.	Email notification has been updated to reference 4.25.4 rather than 4.25.4(a)	Low
	WEMS-4532	IMO were unable to increase the number of capacity credits after a facility passes a requested re-test.	Capacity credits can be increased after a passed re-test	Low
	WEMS-4913	Market Advisory messages were replacing special characters with a question mark.	Market Advisory messages no longer include question marks erroneously.	Low

Status Key	
	Internal changes
	Minimal or no impact to Market Participants
	Needs attention. Potentially requires system or operational procedure changes

4. Other changes

A number of significant technical changes are included with this release. These changes include:

- Upgrade to Java 8, including a full review and harmonization of date / time handling;
- Replacement of web server;
- Full review and simplification of software configuration;
- Upgrade of stale / obsolete libraries (including security patches);
- Consolidation of software components;
- Removal of all software code warnings; and
- Legacy ABB software components extracted into separate libraries.

These changes are not expected to have a functional impact on WEMS. The IMO are conducting a full regression test to validate that the functions of WEMS remain unaffected by these changes. Participants are encouraged to conduct their own testing within the trial environments.

Automated WEMS Certification Testing

The IMO are responsible for performing and maintaining a large number of calculations which have a financial implications on market participants. The IMO must ensure that these calculations are fully compliant with the market rules.

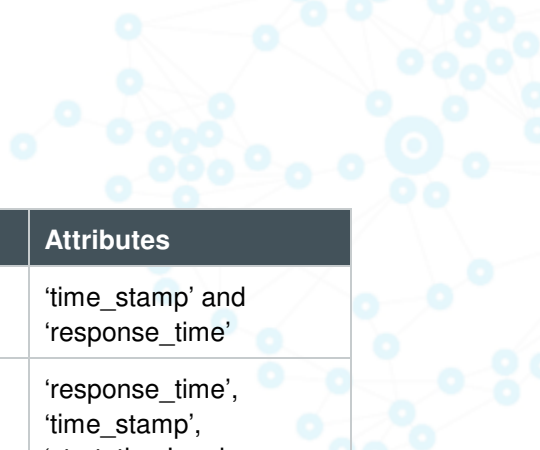
To provide further assurances, the IMO has WEMS certified by an independent body each time a calculation is modified. This is currently a manual process which takes significant time and resources.

As a part of this WEMS release, the IMO have automated a large number of these certification tests which will greatly improve resource allocation and shorten development cycles. These repeatable tests will also increase test coverage and will greatly assist the IMO in the ongoing maintenance and development of WEMS.

Date Format Standardisation

Date formats have been standardised in a number of reports to include the time zone offset. The following table lists the reports and relevant attributes which have adopted the 'YYYY-MM-DDThh:mm:ss.sssTZD' date time format.

Report	WSDL	WSDL Versions	Attributes
Market Advisories Report	IMO MPI Reports	2.2	'release_date'
Dispatch Advisories Report	System Management Reports	2.0, 2.1 and 2.2	'issue_date_time' and 'withdrawal_date_time'



Report	WSDL	WSDL Versions	Attributes
Dispatch Instructions Report	System Management Reports	2.0, 2.1 and 2.2	'time_stamp' and 'response_time'
Operating Instructions Report	System Management Reports	2.2	'response_time', 'time_stamp', 'start_time' and 'end_time'
Ancillary Services Activation Instructions	System Management Reports	2.2	"time_stamp" and "response_time"

For the current list of WSDLs, please visit <http://www.imowa.com.au/home/electricity/market-participants/becoming-a-market-participant/accessing-wems>.

HTTP Strict Transport Security

The IMO have adopted HTTP Strict Transport Security in this release. This change should not have a detrimental impact on the ability of Market Participants to access the MPI or web services. The IMO encourages all Market Participants to validate that their access remains unaffected by this change.

For more information on HTTP Strict Transport Security, please refer to its specification available from: <https://tools.ietf.org/html/rfc6797>.

Retirement of trading web service

The following URL will be retired in this release:

<https://wems.imowa.com.au/mpi/trading/ws/v1?wsdl>

Please ensure the following URL is used:

<https://wems.imowa.com.au/mpi/ws/trading/v1?wsdl>

Auto-publication of reports and new field

In simplifying the operation of the WEM, a number of reports are now published when the relevant data has been received. The reports include the following:

- EM_AncServ;
- EM_AncServFacilities;
- EM_SchPlannedOutages;
- EM_OperLoad; and
- EM_ExPostOutages.

The Market Messages report will provide notification when the above reports are available.



In addition, these reports extracted via web services contain a **publishedDate** field in the report header. This field details the date and time which the relevant report was published. Please note that the contents of the above reports remain unchanged.

Appendix 1: Sample invoice



INDEPENDENT
MARKET
OPERATOR

Payment Summary

ABN 95 221 850 093
Level 17
197 St Georges Terrace
Perth WA 6000
PO Box 7096
Cloisters Square
Perth WA 6850
T +61 8 9254 4300
E operations@imowa.com.au

Test Company Pty Ltd
PO Box 9999
Perth, WA 6000
ABN 99 999 999 999

Summary: 15035

Issued Date: 18/02/2015
Due Date: 20/02/2015

NSTEM May 2014 - Adjustment 2

Description	Amount
Ancillary Service Settlement Amount Demand	4.60
Balancing Demand Amount	0.00
Market Participant Market Fee Settlement Amount *	0.00
Reserve Capacity Refund Market Customer Rebate	0.00
Reserve Capacity LFR Market Customer Rebate	0.00
Reconciliation Settlement Amount for Supply	(9.44)
Reserve Capacity Settlement Amount for Demand	0.00
Market Participant Regulator Fee Settlement Amount *	0.00
Market Participant System Operation Fee Settlement Amount *	0.00
Reconciliation Settlement Amount Demand	7.17
Goods and Service Tax Free - Supplies Made by IMO *	0.00
Goods and Service Tax - Supplies Made to the IMO *	(0.94)
Goods and Service Tax - Supplies Made by the IMO *	1.18
Interest Rate *	0.04
Total Amount	2.61

Items marked with * are GST free.

Prepayment applied to this Payment Summary (1.61)

Payable Amount 1.00

Amounts \$1.00 or less are not settled via Austraclear. Participants need not act on this Invoice / Recipient Created Tax Invoice.

Net payments to IMO must be settled in Austraclear before 10:00am WST.

Prepayment Balance as at 24/02/2015 09:42 10,000.00

Recipient Created Tax Invoice

Supplier

Test Company Pty Ltd
PO Box 9999
Perth, WA 6000
ABN 99 999 999 999

Invoice:

R15035

Issued Date:
Due Date:

18/02/2015
20/02/2015

Recipient

Independent Market Operator
197 St Georges Terrace
Perth WA 6000
ABN 95 221 850 093

Description	GST Exclusive	Sub Total
Taxable Supplies		
Reserve Capacity Refund Market Customer Rebate	0.00	
Reserve Capacity LFR Market Customer Rebate	0.00	
Reconciliation Settlement Amount for Supply	9.44	
GST Exclusive		9.44
GST		0.94
GST Inclusive		10.38
Total Payable by IMO		10.38

Tax Invoice

Supplier

Independent Market Operator
197 St Georges Terrace
Perth WA 6000
ABN 95 221 850 093

Invoice:

T15035

Issued Date:
Due Date:

18/02/2015
20/02/2015

Recipient

Test Company Pty Ltd
PO Box 9999
Perth, WA 6000
ABN 99 999 999 999

Description	GST Exclusive	Sub Total
Taxable Supplies		
Ancillary Service Settlement Amount Demand	4.60	
Balancing Demand Amount	0.00	
Reserve Capacity Settlement Amount for Demand	0.00	
Reconciliation Settlement Amount Demand	7.17	
Goods and Services Tax Free Supplies		
Market Participant Market Fee Settlement Amount	0.00	
Market Participant Regulator Fee Settlement Amount	0.00	
Market Participant System Operation Fee Settlement Amount	0.00	
Interest Rate	0.04	
GST Exclusive		11.81
GST		1.18
GST Inclusive		12.99
Total Payable to IMO		12.99

Adjustment Information

Recipient Created Tax Invoice R15035

Description	Previous Amount	Current Amount	Adjustment Amount
Taxable Supplies			
GST Exclusive	7,293.28	7,302.72	9.44
GST	729.33	730.27	0.94
GST Inclusive	8,022.61	8,032.99	10.38

Tax Invoice T15035

Description	Previous Amount	Current Amount	Adjustment Amount
Taxable Supplies			
GST Exclusive	93,678.12	93,689.89	11.77
GST	9,367.81	9,368.99	1.18
GST Inclusive	103,045.93	103,058.88	12.95
Goods and Services Tax Free Supplies			
GST Exclusive	766.30	766.30	0.00

Appendix 2: Adjustment number screenshots

Adjustment number identified in the description column of Invoices MPI tab:

Invoices							
Statements PIRs ICR Logs							
Market: NSTEM Invoice Date Trade Date Invoice Number From: 14-01-2015 To: 05-02-2015 Participant: -- ALL -- Filter							
File	Size	Description	Invoice Number	Invoice Date	Due Date	Participant	
	70.91 Kb	Final invoice for Jan 2014 - Adjustment 3	14800	19-01-2015	21-01-2015		

Adjustment number identified in Statements JSON response:

```
{
  ... "filename": "BS_F_PARTICIPANT_2014-05-01(1).csv",
  ... "documentType": "STATEMENT",
  ... "participant": "PARTICIPANT",
  ... "documentDate": "2014-05-01",
  ... "length": 3536,
  ... "fileRef": {
    ... "id": "BS_F_PARTICIPANT_2014-05-01(1).csv",
    ... "ref": "https://wems.imowa.com.au/mpi/ws/rest/v1/settlement/files/BS_F_PARTICIPANT_2014-05-01(1).csv"
  },
  ... "fileType": "CSV",
  ... "created": "2015-03-11T15:25:50.108",
  ... "market": "NSTEM",
  ... "segment": "BS",
  ... "tradeMonth": "2014-05",
  ... "adjustment": 2
}
```

Adjustment number missing from Statements and PIR MPI tabs:

Invoices							
Statements PIRs ICR Logs							
Market: NSTEM Created Date Statement Date From: 28-04-2015 To: 14-05-2015 Participant: -- ALL -- Segment: -- ALL -- Filter							
File	Size	Segment	Trade Month	Statement Date	Participant		
	268 Bytes	AS	2015-03	31-03-2015			

Invoices							
Statements PIRs ICR Logs							
Market: NSTEM Created Date PIR Date From: 01-01-2015 To: 17-01-2015 Participant: -- ALL -- Filter							
File	Size	Trade Month	PIR Date	Participant			
	48.07 Kb	2014-01	31-01-2014				