



Market Operations

Monthly Service Provider Report

This report details monthly information in relation to the Wholesale Information & Trading System (WITS), clearing manager, pricing manager and reconciliation manager functions performed by NZX under contract to the Electricity Authority (Authority).

October 2016



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1. Introduction

1.1 Purpose

This report details monthly information in relation to the Wholesale Information & Trading System (WITS), clearing manager, pricing manager and reconciliation manager functions performed by NZX under contract to the Electricity Authority (Authority).

This report contains core reporting requirements in compliance with Clauses 3.13 and 3.14 of the Electricity Participation Code 2010 and relevant Market Operator Service Provider (MOSP) agreements.

1.2 Contact Details

The following is a list of contact details for further information or questions pertaining to this report:

WITS Market Information System

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Systems Delivery Manager, Energy	

Service Operations

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Energy Operations Manager	



2. Compliance

2.1 Compliance with Regulations and Code

For this month, to the best of our knowledge, the WITS, reconciliation manager and pricing manager service providers fully complied with the Code and regulations.

There was one breach of the Code by the clearing manager. By 1600 hours on the 8th business day for the previous billing period clauses 13.198, 13.199, 13.207 and 13.208 require the Clearing Manager to send constrained on and constrained off information to the system operator and publish this information to market participants. Constrained on and constrained off amounts were calculated at 11:44 on 11/10/16 (business day 7), however, it took until 16:13 on 12/10/16 (business day 8) to publish this information. The clearing manager has improved its processes to mitigate against this type of breach from recurring.

2.2 Operation of the Regulations and Code

For this month we have identified one area of the Code with regard to pricing manager operations that may require addressing. This follows a recent series of pricing errors claimed in October.

Schedule 13.3. Clause 8 of the Code requires that the objective function of the pricing manager's modelling system (SPD) is maximised to an accuracy specified in the model formulation. The system operator's model formulation does not appear to contain explicit accuracy specifications. We therefore suggest that an obligation is placed on the system operator and pricing manager to provide accuracy specifications in the published model formulation. It may also be beneficial for the system operator and pricing manager to consult on these accuracy specifications with market participants.

This will have the benefit of clarifying to the market the quality standards expected to be achieved by the system operator and pricing manager's modelling systems.

2.3 Compliance with MOSP Agreements

The non-functional requirements for all roles require that the service provider must provide basic training materials by the 1 October 2016. These materials were provided late on the 28 October 2016.



3. Service Level Reporting

3.1 WITS service levels against target

Measure	Target	Achieved this month
WITS availability	>99.72%	100%
WITS file upload availability	>99.72%	100%
Average time to publish NRSS & PRSS	<1 minute	18.5 sec
Average time to publish NRSL & PRSL	<7 minutes	1 min 04 sec
Average time to publish provisional/interim/final prices	<1.5 minutes	04 sec

3.2 Clearing manager service levels

3.2.1 Clearing manager service levels against targets

Measure	Target	Achieved this month
No. of wash-up notifications published later than the 5th business day of the month	Zero	0 late publications
No. of hedge settlement agreement amounts published later than the 5th business day of the month	Zero	0 late publications
No. of constrained amounts sent to system operator later than 09:00 hrs on 8th business day of the month	Zero	0 late notifications
Availability achieved during the month	> 99.5%	100%

3.2.2 Clearing manager service level reporting

Measure	Metric	Achieved this month
Number of publication targets missed	No.	0
Number of invoice revisions during the month	No.	0
Date of issue of last invoice during the month	Date	12 October 2016
Number of unplanned outages during the month	No.	0
Number of planned outages during the month	No.	0
Availability achieved during the month	% attained	100%
Number of prudential defaults during the month	No.	0
Scaling applied to generator payments	% attained	0%
Number of data files provided to the Authority	No.	18 constrained amount files; 4 weekly prudential summaries.

3.3 Pricing manager service levels

3.3.1 Pricing manager service levels against targets

Measure	Target	Achieved this month
Interim prices published by 09:20 hrs, provided there is no provisional price situation, and the input information has been received by 07:30 hrs	No more than one late publication in a rolling three month period	0 late publications
On a weekday, provisional prices published before 10:20 hrs, provided the input information has been received by 07:30 hrs	No more than one late publication in a rolling three month period	0 late publications
On a weekend day, provisional prices published before 09:20 hrs, provided the input information has been received by 07:30 hrs	No more than one late publication in a rolling three month period	0 late publications
A price that has been published as provisional will be republished as interim on the same day that a revised data notice is received, provided that a notice is received before 03:00 hrs	No more than one late publication in a rolling three month period	0 late publications
No. of price processing errors in a calendar month	Zero	0 price processing errors
Average time to recommend to the Authority a resolution to a pricing error claim over a rolling 12 month period (from 1 November 2016)	Two business days over a rolling 12 month period (in the event of price processing errors)	4.3 (includes SO response time)
Months since last disaster recovery test for standalone Scheduling, Pricing and Dispatch (SPD)	No more than six months	1 month (DR test in Sep 16)
Months since last test of back-up pricing at Transpower	No more than six months	0 month (back up pricing at TP Oct 16)
No. of unplanned system outages	Zero	0 unplanned system outages
Planned outages coordinated with the system operator	Yes (in the event of an unplanned outage)	N/A
No. breaches of the incident response levels contained in Section 7 of this report	Zero	0 breaches
Pricing case files and pricing case file status sent to the Authority on time (as specified in 9.2 of the MOSP agreement)	Yes	On 18 October 2016 files were not sent on time due to SFTP connection issues

3.3.2 Pricing manager service level reporting

Measure	Metric	Achieved this month
Number of interim or final prices published late in current reporting month	No.	0
Number of interim or final prices published late in last twelve months	No.	0
Average time to recommend to the Authority, a resolution to a price error claim	Days	4.3
Number of price error claims received	No.	7 (one withdrawn)
Disaster recovery and backup obligations	Achieved	Achieved
Total outages:		
- Planned	No. planned	0
- Planned without system operator coordination	No. planned without system operator coordination	0
- Unplanned	No. unplanned	0
Number of data files provided to the Authority late	No.	See above

3.4 Reconciliation manager service performance

3.4.1 Reconciliation manager service levels against targets

Measure	Target	Achieved this month
Availability between business days 1 and 4, and 9 and 13	99.8%	100%
Availability for other times of the month	99.5%	100%

3.4.2 Reconciliation manager service level reporting





Measure	Metric	Achieved this month
Number of days late for publication of reconciliation information	0 Days	0 days
System availability between business days 4, 7, 9 and 13 for the month	% attained	100%
System availability outside business days 4, 7, 9 and 13 for the month	% attained	100%
Number of volumes disputes resolved in the month	No.	0
Number of requests to re-run reconciliation as a result of an invoice dispute	No.	0 requests



Measure	Metric	Achieved this month
Setup of approved profiles within 1 business day of receiving a notification from the Authority	% attained	100% (one)
Total outages:		
- Planned	No.	0 hours
- Unplanned	No.	0 hours











4. Systems Update

4.1 Functional specification status

System	Latest revision	Approved by the Authority**
WITS	4.9	
Clearing manager	20.2	
Pricing manager	4.2	
Reconciliation manager	9.26	

**For this table, and for the remaining tables in this report,  indicates yes and  indicates no.

4.2 Backup requirements

System	Daily data backup requirement meet ¹	Weekly data backup requirement meet ²	Reason for requirement not being met
WITS			N/A
Clearing manager			N/A
Pricing manager			N/A
Reconciliation manager			N/A

4.3 Disaster recovery and BCP testing

Date	Service	Application/Scope	Status
24 May 2016	All services	BCP facilitated exercise	Complete
12 Sep 2016	All services	BCP functional test	Complete

¹ Backup copies of all data and processed data must be taken at least daily and stored in a secure offsite location. Likewise, copies of the latest version of the software must also be kept offsite.

² At least weekly, a backup copy of the data, processed data and software must be delivered and stored at an offsite location at least 100km from the premises used to provide the regular services.

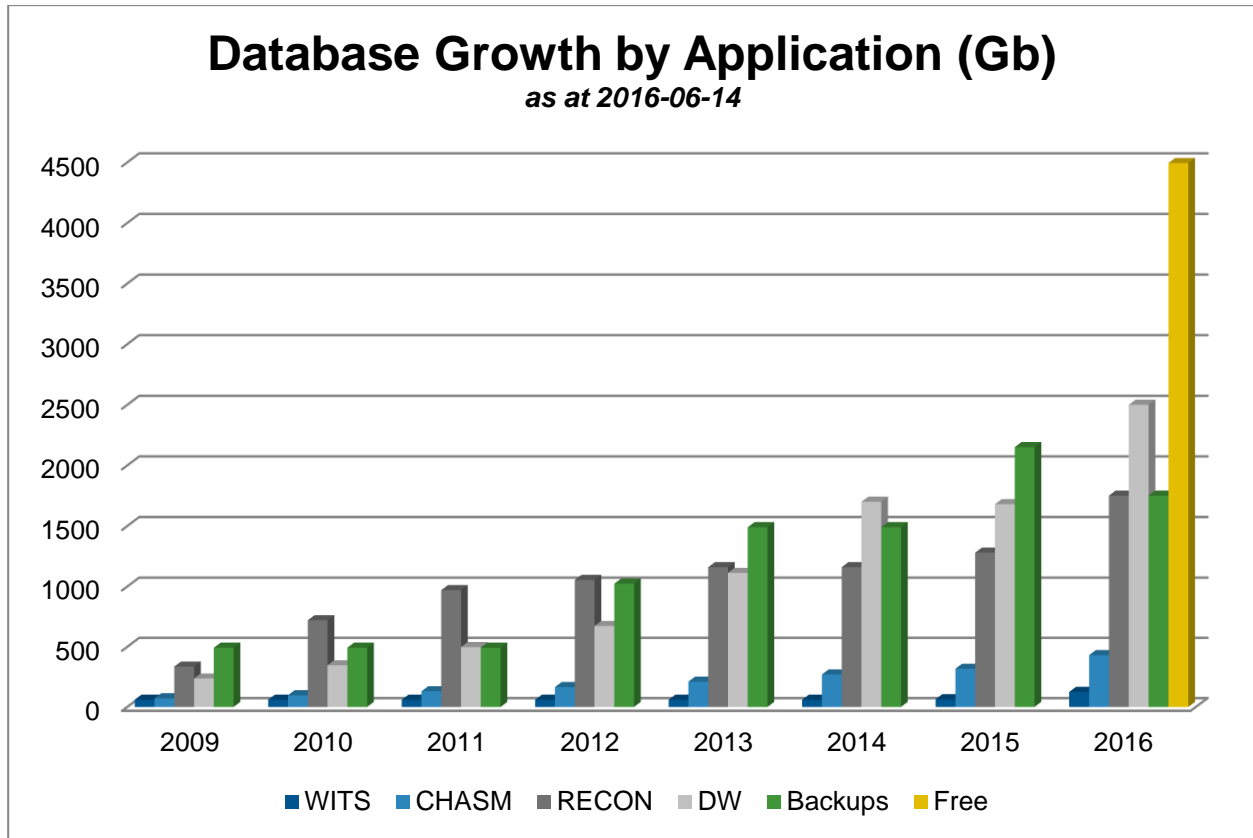
Date	Service	Application/Scope	Status
3 - 17 May 2016	Reconciliation manager	Disaster Recovery	Complete
3 - 17 May 2016	Clearing manager	Disaster Recovery	Complete
3 - 17 May 2016	Pricing manager	Disaster Recovery	Complete
3 - 17 May 2016	WITS	Disaster Recovery	Complete
14 - 28 Sep 2016	Reconciliation manager	Disaster Recovery	Complete
14 - 28 Sep 2016	Clearing manager	Disaster Recovery	Complete
14 - 28 Sep 2016	Pricing manager	Disaster Recovery	Complete
14 - 28 Sep 2016	WITS	Disaster Recovery	Complete

4.4 Developer access to production systems

Reporting system for this metric are in development



5. System Capacity



Note: (Free space shown from 2016 only)

6. Incidents

6.1 WITS incident - fault response and resolution times

Priority	Measure	Standard	Achieved this month	No. of incidents
1	Respond within 15 minutes of receipt of a support request	100%	100%	0
	Work around or resolve within 6 hours	100%	100%	0
	Work around resolved within 20 business days	100%	100%	0
2	Respond within 2 hours of receipt of a support request	100%	100%	0
	Work around or emergency fix within 1 business day	100%	100%	0
	Resolve within 20 business days	100%	100%	0
3	Respond within 1 business day	100%	100%	0
	Resolve within 40 business days	100%	100%	0
4	Acknowledgment of downgrade of severity to level 4 within 1 business day of downgrade	100%	100%	0
	Resolve at the next convenient opportunity as agreed with the Authority	100%	100%	0

6.2 Clearing manager incident – fault response and resolution times

Priority	Measure	Standard	Achieved this month	No. of incidents
1	Respond within 15 minutes of receipt of a support request, received between 07:30 hrs to 19:30 hrs on a business day	100%	100%	0
	Work around or resolve within 6 hours	100%	100%	0
	Work around resolved within 20 business days	100%	100%	0
2	Respond within 2 hours of receipt of a support request, received between 07:30 hrs to 19:30 hrs on a business day	100%	100%	1
	Work around or emergency fix within 1 business day	100%	100%	1
	Resolve within 20 business days	100%	100%	1
3	Respond within 1 business day	100%	100%	0
	Resolve within 40 business days	100%	100%	0
4	Acknowledgment of downgrade of severity to level 4 within 1 business day of downgrade	100%	100%	0
	Resolve at the next convenient opportunity as agreed with the Authority	100%	100%	0

6.3 Pricing incident - fault response and resolution times

Priority	Measure	Standard	Achieved this month	No. of incidents
1	Respond within 15 minutes of receipt of a support request	100%	100%	0
	Work around or resolve within 6 hours	100%	100%	0
	Work around resolved within 20 business days	100%	100%	0
2	Respond within 2 hours of receipt of a support request	100%	100%	0
	Work around or emergency fix within 1 business day	100%	100%	0
	Resolve within 20 business days	100%	100%	0
3	Respond within 1 business day	100%	100%	0
	Resolve within 40 business days	100%	100%	0
4	Acknowledgment of downgrade of severity to level 4 within 1 business day of downgrade	100%	100%	0
	Resolve at the next convenient opportunity as agreed with the Authority	100%	100%	0

6.4 Reconciliation manager incident - response and resolution times

Priority	Measure	Standard	Achieved this month	No. of incidents
1	Respond within 15 minutes of receipt of a support request, received between 07:30 hrs to 19:30 hrs on a business day	100%	100%	0
	Work around or resolve within 6 hours	100%	100%	0
	Work around resolved within 20 business days	100%	100%	0
2	Respond within 2 hours of receipt of a support request, received between 07:30 hrs to 19.30 hrs on a business day	100%	100%	0
	Work around or emergency fix within 1 business day	100%	100%	0
	Resolve within 20 business days	100%	100%	0
3	Respond within 1 business day	100%	100%	3
	Resolve within 40 business days	100%	100%	3
4	Acknowledgment of downgrade of severity to level 4 within 1 business day of downgrade	100%	100%	0
	Resolve at the next convenient opportunity as agreed with the Authority	100%	100%	0

7. Stakeholders

7.1 User group meetings

Role	Date	Status
Reconciliation manger and clearing manager	10 August 2016	Complete
WITS and pricing manager	12 October 2016	Complete
All roles	Q1 / Q2 2017	Planned

7.2 Stakeholder meetings

Participant	Date	Status
ELKI	28 October 2016	Complete
PION	21 October 2016	Complete
BCPL	18 October 2016	Complete
New entrant	28 October 2016	Complete

8. Clearing and Settlement Market Summary

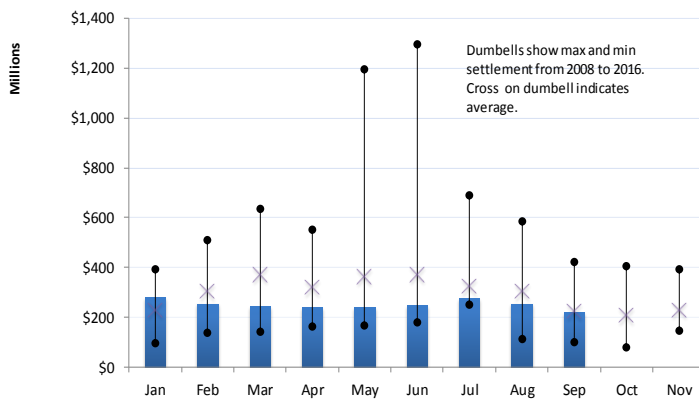
Settlement Data

Amount	
Settlement month	September 2016
Settlement date	20 October 2016
Amounts owed from payers	\$219,471,396.03
Amounts owed to payees	\$214,964,116.39
Loss and constraint excess	\$4,327,628.55
Payer volumes	3,955,610.84 MWh
Payee volumes	3,568,498 MWh

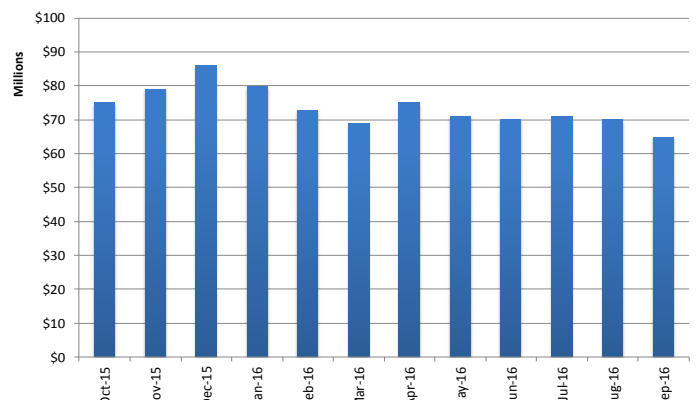
Prudential Data

Amount	
As at date	30 October 2016
Total security held	\$252,844,667.29
Total assessed exposure	\$59,639,999.46
No. of security increases	9
No. of security reductions	3
Settlements made from prudential	5

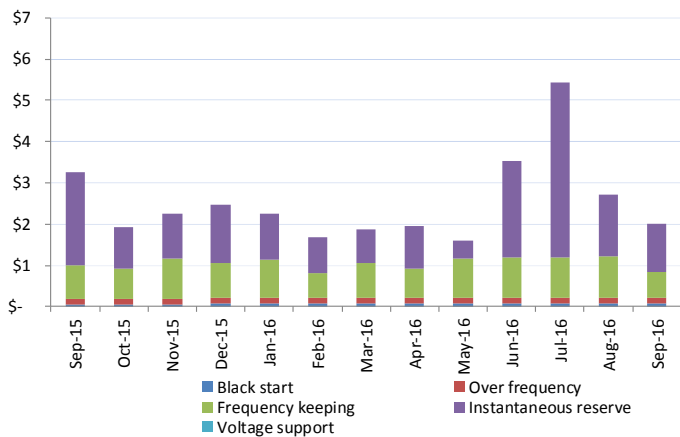
2016 Payer Amounts Owed Relative to Previous Years



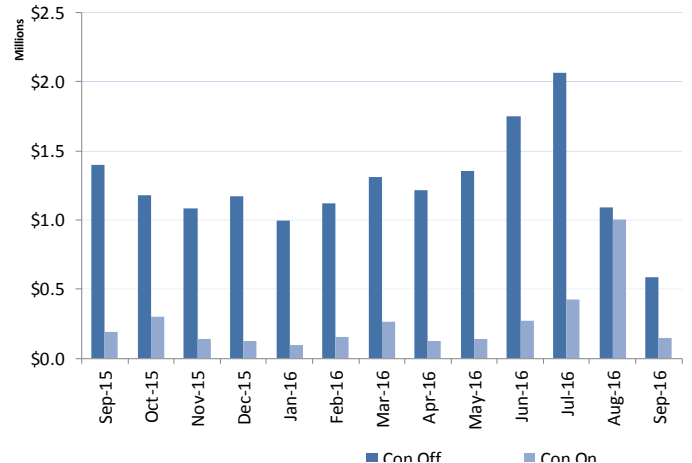
2016 Amounts Payable since Net Settlement Introduced



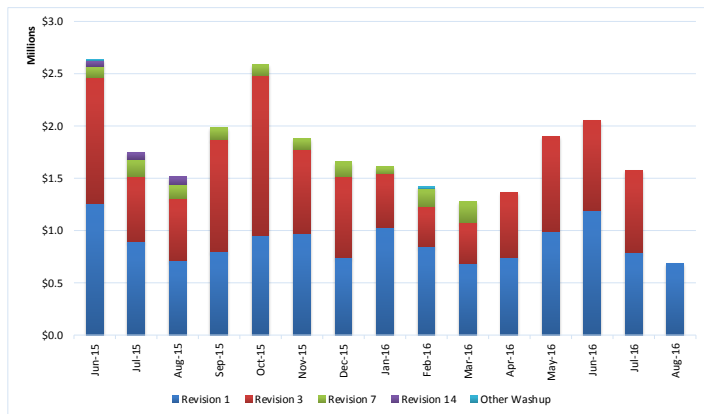
13 Month Rolling Total Ancillary Service Amounts



13 Month Rolling Total Constrained Amounts



15 Month Rolling Washups*



This chart shows total wash-ups due to the clearing manager by billing period and by wash-up revision month

Must Run Dispatch Auction

Amount	
Month	October 2016
Cleared day auction prices	\$0.01 for all days
Cleared night auction prices	\$0.01 for all days
No. of revised bids	9

Washup Totals

September 2016 Washups	Value \$
Revision 1	\$688,174.71
Revision 3	\$856,761.64
Revision 7	\$170,444.24
Revision 14	\$66,734.64
Other	\$55,809.10
Total	\$1,837,924.33

This chart shows total wash-ups due to the clearing manager by billing period and by wash-up revision month

9. Pricing Market Summary

Pricing Statistics

	Amount
Month	October 2016
No. of solves	52
No. of solves not published	9
No. of solves published as provisional	12
No. of solves published as final	31
No. of pricing error claims	7

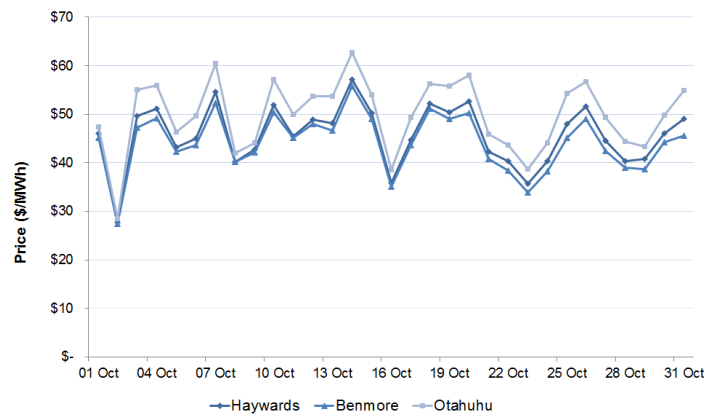
Provisional Price Situations

	Amount
Month	October 2016
No. of infeasibility situations	15
No. of metering situations	2
No. of high spring washer price situations	0
No. of SCADA Situations	0

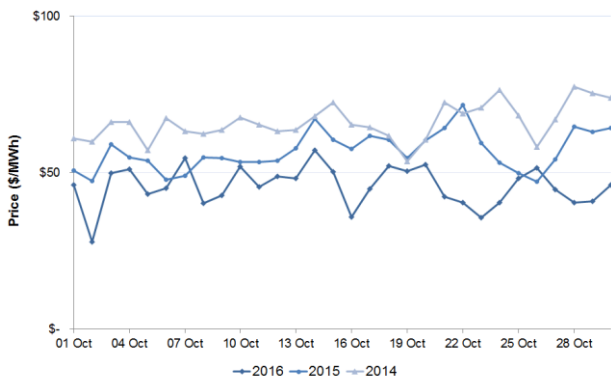
Pricing Publication Times

	Amount
1st solve published same day before 9:22	15
2nd solve published same day before 12:00	9
2nd solve published same day before 17:00	0
2nd solve published interim 1st business day following weekend or weekday provisional	5
Interim solve publication delayed more than one business day	2

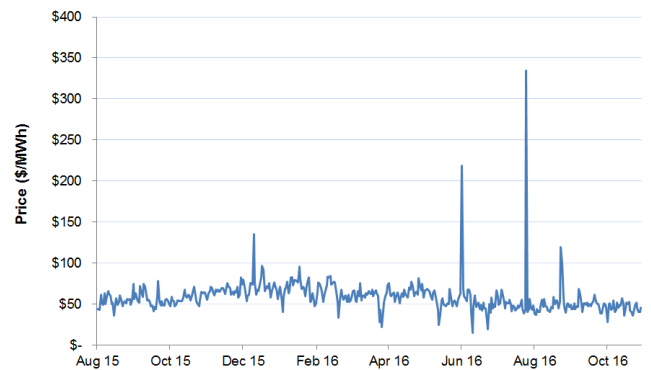
Daily Average



Daily Average Haywards Price Comparison

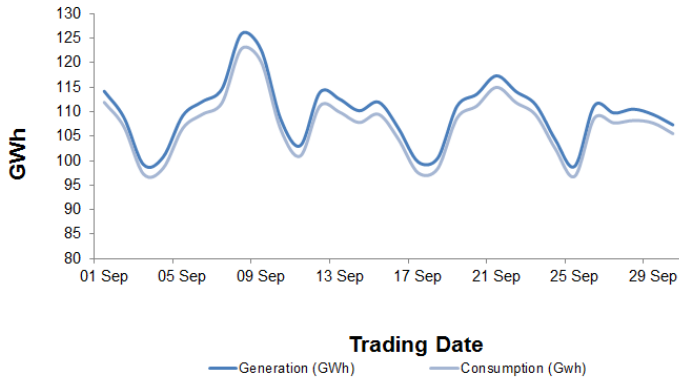


Haywards 13 Month Daily Average Price Comparison

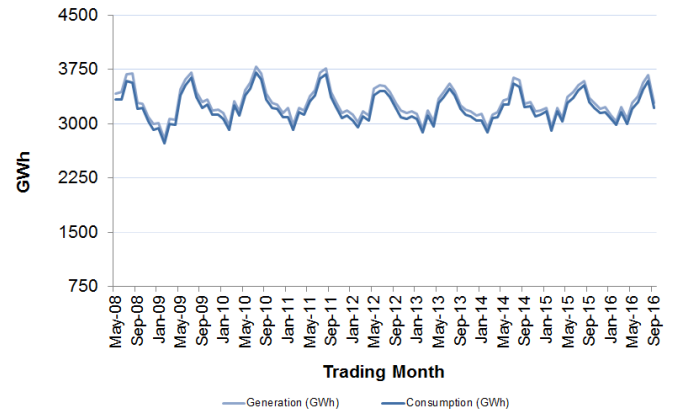


10. Reconciliation Market Summary

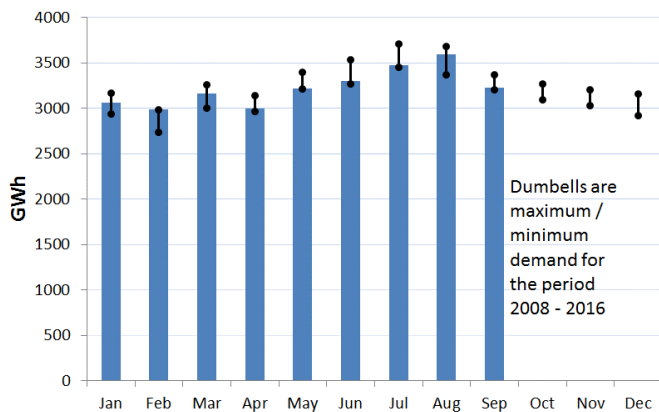
Monthly Electricity Volumes



New Zealand Electricity Volumes Traded – Continuous Series



2016 New Zealand Monthly Demand Relative to Previous Years



2016 New Zealand Monthly Generation Relative to Previous Years

