



How will dispatchable demand work using WITS?

Modified Option
Dispatchable Demand

Purpose:	Document the flow from Bids to Dispatch on to Con-on/off payments		
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Purpose:

The purpose of this document is to outline what is expected from a Dispatch Capable Load Station (DCLS) in order to participate in dispatchable demand (DD) using the wholesale information and trading system (WITS).

Entering Bids:

Bids can be entered using a bid file which is very similar to the existing bid file, however, has 2 additional columns for the DCLS code and the identifier if the bid is for a nominated dispatch bid (DD-Bid) or a nominated non-dispatch bid (non-DD bid). (see file spec on Page 6)

The same file can contain both DD and non-DD bids for one or more DCLS.

GXP bids have to be submitted in a separate file.

GXP code	Date	Period	Band 1 (\$)	power 1 (MW)	band 2 (\$)	power 2 (MW)	band 3 (\$)	power 3 (MW)	...	band 10	power 10	client code	DCLS code	Dispatchable	Free Text	compliance reason
ABC0123	1/08/2013	14	100	10	40	10	30	30					xyz	y		
ABC0123	1/08/2013	15	100	10	40	10	30	30					xyz	y		
ABC0123	1/08/2013	16	100	10	40	10	30	30					xyz	y		
ABC0123	1/08/2013	17	100	10	40	10	30	30					xyz	y		
ABC0123	1/08/2013	18	9999	30									xyz	N		
ABC0123	1/08/2013	19	9999	30									xyz	N		
ABC0123	1/08/2013	20	9999	30									xyz	N		
ABC0123	1/08/2013	21	9999	30									xyz	N		
ABC0123	1/08/2013	22	9999	60									xyz	N		
ABC0123	1/08/2013	23	9999	60									xyz	N		
ABC0123	1/08/2013	24	9999	60									xyz	N		
ABC0123	1/08/2013	25	9999	60									xyz	N		
ABC0123	1/08/2013	26	9999	60									xyz	N		
ABC0123	1/08/2013	27	9999	60									xyz	N		
ABC0123	1/08/2013	28	9999	60									xyz	N		
ABC0123	1/08/2013	29	9999	60									xyz	N		
ABC0123	1/08/2013	30	9999	30									xyz	N		
ABC0123	1/08/2013	31	9999	30									xyz	N		
ABC0123	1/08/2013	32	9999	30									xyz	N		
ABC0123	1/08/2013	33	100	10	40	10	30	30					xyz	y		
ABC0123	1/08/2013	34	100	10	40	10	30	30					xyz	y		
ABC0123	1/08/2013	35	100	10	40	10	30	30					xyz	y		
ABC0123	1/08/2013	36	100	10	40	10	30	30					xyz	y		
ABC0123	1/08/2013	37	100	10	40	10	30	30					xyz	y		
ABC0123	1/08/2013	38	100	10	40	10	30	30					xyz	y		
ABC0123	1/08/2013	39	100	10	40	10	30	30					xyz	y		
ABC0123	1/08/2013	40	100	10	40	10	30	30					xyz	y		
ABC0123	1/08/2013	41	100	10	40	10	30	30					xyz	y		
ABC0123	1/08/2013	42	100	10	40	10	30	30					xyz	y		
ABC0123	1/08/2013	43	100	10	40	10	30	30					xyz	y		
ABC0123	1/08/2013	44	100	10	40	10	30	30					xyz	y		
ABC0123	1/08/2013	45	100	10	40	10	30	30					xyz	y		
ABC0123	1/08/2013	46	100	10	40	10	30	30					xyz	y		
ABC0123	1/08/2013	47	100	10	40	10	30	30					xyz	y		
ABC0123	1/08/2013	48	100	10	40	10	30	30					xyz	y		
ABC0123	2/08/2013	1	100	10	40	10	30	30					xyz	y		
ABC0123	2/08/2013	2	100	10	40	10	30	30					xyz	y		

Example of a bid file (**Note:** actual file won't have headers)



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This example DCLS ABC0123 xyz has submitted the following nominated dispatch bids for Trading periods 14-17 and 33 to 13:

- use of 50 MW if the price is below \$30
- use of 20 MW if the price is between \$30 and \$40
- use of 10 MW if the price is between \$40 and \$100.

During trading periods 18-32, this DCLS does not want to be dispatched and “normal” nominated bids were submitted for this DCLS

On the screen currently used to upload bids and offers, we will add one more tick box, indicating if the file being uploaded contains nominated bids from a DCLS. This upload will allow participants to provide WITS both nominated dispatch (DD bid) and nominated non-dispatch bids (non-DD bid) for a DCLS in the one file.

File Upload

File Type

☐ Nominated Bids ☐ Difference Bids

☐ Offers ☐ Retailer Reserve Offers

☐ Generator Reserve Offers ☐ FK Offers

☒ Nominated DCLS Bids

Two Hour Validation

☐ Discard quantity changes within 2 hrs

☐ Grid emergency: allow price changes within 2 hrs

☐ Discard entire file if orders are within 2 hrs

File Upload Status

File Type	Progress	%	Time	Good	Errors	Upload Time
OFFER	██████████	100	Finished	0	0	04-OCT-2012 14:34:50

Bid confirmation:

Once the bids have been received by the System Operator (Transpower) via WITS, Transpower via WITS will provide a Bid confirmation. The file with this bid confirmation will be a variation of the standard order confirmation file.

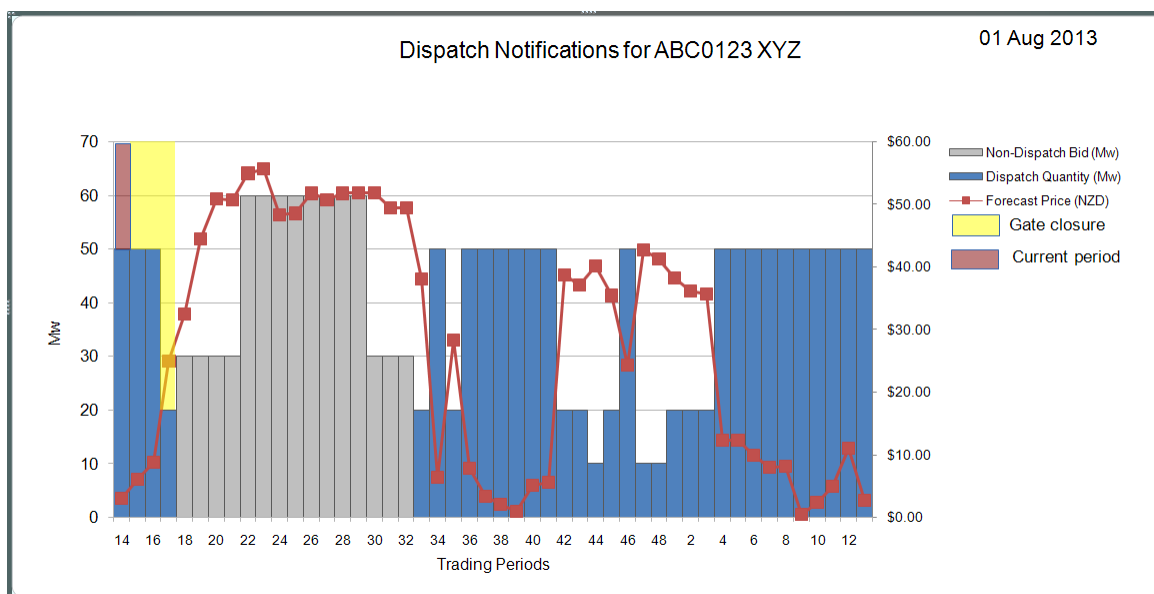
This is a file that WITS sends to the participant to confirm the SO has received their bids.

Filename	<order type><download time of file>.csv.gz.pgpp
Example	DCLSBID20030508043842.csv.gz.pgpp
Description	the filename is <order type> followed by the time of the file download, then by „.csv.gz.pgpp“ The order type may be BID, DIFFBID, OFFER, PCMP, GCMP or FK
Location	/private folder
Frequency	The file will be created every 5 minutes.
Retention	48 hours
Zipped Available	Encrypted and zipped only

Dispatch Notification

Dispatch notifications are included in the NRSS / NRSL files that are already provided by WITS. However, the fine specification has been extended to include a new power type of "B" to indicate the dispatch quantity.

In addition, the dispatch information will be displayed on a new screen.



The above chart is a mock up of the new WITS screen displaying participants dispatch patterns based on their bids and forecast prices.

- The left hand side shows the quantity in MW,
- the bottom line shows the Trading period and
- the right hand scale shows the forecast price in \$.
- The blue periods indicate the dispatch quantities (for periods for which DD bids were submitted),
- the gray periods indicate non-dispatch quantities (for periods where "normal nominated" bids were submitted – not DD bids)
- The red line shows the forecast price for each MW.
- The graph also indicates the current trading period (Brown line) and
- indicates gate closure (yellow) where participants are unable to adjust their bids

Details displayed on in this example:

- The forecast price for Period 14 – 16, 34, 36-41, 46, 4-12 is predicted to be below \$30. Thus the DCLS can be expected to be dispatched to use 50 MW.
- The forecast price for Period 17, 33, 35, 42, 43, 45, 1-3 is predicted to be between \$30 and \$40. Thus the DCLS can be expected to be dispatched to use 20MW.
- The forecast price for Period 44, 47, 48 is predicted to be between \$40 and \$100. Thus the DCLS can be expected to be dispatched to use 10 MW.

This dispatch screen is backed up by the Dispatch notification Table. Which will look like this.



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Dispatch Notifications Table Display

Trading Date	Trading Period	GXP	DCLS	Forecast Price	Dispatch Quantity	Non-Dispatch Bid
01/08/13	14	ABC0123	XYZ	\$3.06	50	-
01/08/13	15	ABC0123	XYZ	\$6.18	50	-
01/08/13	16	ABC0123	XYZ	\$8.79	50	-
01/08/13	17	ABC0123	XYZ	\$25.04	20	-
01/08/13	18	ABC0123	XYZ	\$32.59	-	30
01/08/13	19	ABC0123	XYZ	\$44.51	-	30
01/08/13	20	ABC0123	XYZ	\$50.86	-	30
01/08/13	21	ABC0123	XYZ	\$50.82	-	30
01/08/13	22	ABC0123	XYZ	\$55.00	-	60
01/08/13	23	ABC0123	XYZ	\$55.72	-	60
01/08/13	24	ABC0123	XYZ	\$48.32	-	60
01/08/13	25	ABC0123	XYZ	\$48.61	-	60
01/08/13	26	ABC0123	XYZ	\$51.81	-	60
01/08/13	27	ABC0123	XYZ	\$50.80	-	60
01/08/13	28	ABC0123	XYZ	\$51.81	-	60
01/08/13	29	ABC0123	XYZ	\$51.84	-	60
01/08/13	30	ABC0123	XYZ	\$51.84	-	30
01/08/13	31	ABC0123	XYZ	\$49.47	-	30
01/08/13	32	ABC0123	XYZ	\$49.47	-	30
01/08/13	33	ABC0123	XYZ	\$38.16	20	-
01/08/13	34	ABC0123	XYZ	\$6.46	50	-
01/08/13	35	ABC0123	XYZ	\$28.37	20	-
01/08/13	36	ABC0123	XYZ	\$7.84	50	-
01/08/13	37	ABC0123	XYZ	\$3.43	50	-
01/08/13	38	ABC0123	XYZ	\$2.07	50	-
01/08/13	39	ABC0123	XYZ	\$1.07	50	-
01/08/13	40	ABC0123	XYZ	\$5.10	50	-
01/08/13	41	ABC0123	XYZ	\$5.70	50	-
01/08/13	42	ABC0123	XYZ	\$38.71	20	-
01/08/13	43	ABC0123	XYZ	\$37.15	20	-
01/08/13	44	ABC0123	XYZ	\$40.16	10	-
01/08/13	45	ABC0123	XYZ	\$35.49	20	-
01/08/13	46	ABC0123	XYZ	\$24.34	50	-
01/08/13	47	ABC0123	XYZ	\$42.77	10	-
01/08/13	48	ABC0123	XYZ	\$41.26	10	-
02/08/13	1	ABC0123	XYZ	\$38.31	20	-



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Constraint-On / Constraint- off

The constraint-on / constraint-off amounts will be displayed similar to the display currently used for generation. It won't be available until after the metering information has been received and the invoicing run in CHASM has been completed.

WITS - emhdopt - Windows Internet Explorer

https://www.electricitywits.co.nz/omit/web_main_pages.home

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WITS - emhdopt

WITS Time: 23 Aug 2013 13:31:14 Latest NRSI Run Time: 23/08/2013

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Dispatchable Demand Constrained Amounts

Constrained Indicator On ☒ Off ☐

Invoice Period Id 213: 01-JUL-2013 to 31-JUL-2013

Organisation Code ABCD

Grid Point ABC0123

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Organisation	Grid Point	Trading Date	Trading Period	Total Constrained Amount (\$)
ABCD	ABC0123	01/07/2013	1	11.21
ABCD	ABC0123	01/07/2013	2	2.45
ABCD	ABC0123	01/07/2013	3	9.33

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File Formats

Dispatchable Demand Bid Format

This format is very similar to the format currently used for nominated bids, only the 2 yellow marked items were added to identify the DCLS and if these bids are nominated dispatch or non-dispatch bids.

Field	Format	Notes
GXP code	CHARACTER (8)	Grid Exit Point
Trading Date or Date Applicable	DATE	Trading Date
Period Code	NUMBER (2)	Trading Period
Band 1 price	Number (8,2)	NZ dollars. Mandatory
Band 1 power	Number (10,3)	MW. Mandatory
Band 2 price	Number (8,2)	NZ dollars. Must be less than Band 1 Price
Band 2 power	Number (10,3)	MW
Band 3 price	Number (8,2)	NZ dollars. Must be less than Band 2 Price
Band 3 power	Number (10,3)	MW
Band 4 price	Number (8,2)	NZ dollars. Must be less than Band 3 Price
Band 4 power	Number (10,3)	MW
Band 5 price	Number (8,2)	NZ dollars. Must be less than Band 4 Price
Band 5 power	Number (10,3)	MW
Band 6 price	Number (8,2)	NZ dollars. Must be less than Band 5 Price
Band 6 power	Number (10,3)	MW
Band 7 price	Number (8,2)	NZ dollars. Must be less than Band 6 Price
Band 7 power	Number (10,3)	MW
Band 8 price	Number (8,2)	NZ dollars. Must be less than Band 7 Price
Band 8 power	Number (10,3)	MW
Band 9 price	Number (8,2)	NZ dollars. Must be less than Band 8 Price
Band 9 power	Number (10,3)	MW
Band 10 price	Number (8,2)	NZ dollars. Must be less than Band 9 Price
Band 10 power	Number (10,3)	MW
Client code	CHARACTER (4)	A unique code for the Retailer/Distributor who will be contracted by the bid
DCLS Code	CHARACTER (6)	Dispatch Capable Load Station identifier.
Dispatchable Y/N	CHARACTER (1)	Indicates if this is a dispatchable demand bid (Y or N)
Free Text	CHARACTER(16)	Enables the Retailer/Distributor to attach a unique marker to each order, which will be carried through the scheduling process
Compliance Reason	CHARACTER(4000)	Reason for order change/new submission within 2hours/30mins. This will need to be enclosed with quotation marks (ascii character 34) and will take precedence over the one entered on the screen.