Glossary

Term	Definition	Term	Definition
Non-Conforming GXP	A grid exit point that does not follow a predictable daily demand pattern is considered to be a non-conforming GXP. Purchasers at non-conforming GXPs are to prepare their own forecasts of electricity usage at those GXPs for market scheduling purposes in the form of **nominated bids**.	**Conforming GXP**	A grid exit point that has a predictable demand pattern is considered to be a conforming GXP. The demand at a conforming GXP is forecast by the System Operator. A purchaser at a conforming GXP does not have to submit a nominated bid, but may elect to submit **difference bids** to signal that some load at the GXP may differ depending on the purchaser's real time expectations of price. A difference bid represents the purchaser's reasonable endeavours to predict an increase or decrease in its usual quantity of electricity demanded for a trading period at a relevant price at the GXP.
Medium Term Load Forecast (MTLF)	The forecast of demand prepared by the System Operator for use at conforming GXPs. The MTLF is computed automatically every 30 minutes shortly after the half-hour in order to guarantee that the most recent load averages have been updated. Overall the forecast spans 15 days, including the current day, and the forecast for each area is made up of a number of components: historical load information, historical weather information, and weather forecast information. Real time staff can manually adjust the load forecast using overrides if the forecast is too far from the actual load.	**Scheduling, Pricing and Dispatch (SPD)**	A computer system used to calculate the schedules and prices for the New Zealand Electricity Market and the reserves market. It also calculates dispatch instructions for real time dispatch.
Simultaneous Feasibility Test (SFT)	Automatic constraints management system. SFT helps to ensure the security of the power system by security checking the Scheduling, Pricing and Dispatch (SPD) solution. It identifies potential overloading issues and resolves them by creating thermal constraints for use by SPD in its next iteration. Constraints are typically seen where there is an outage of a circuit or generator.	**Reserve Management Tool (RMT)**	Calculates the amount of reserves necessary to meet under-frequency criteria required for real time dispatch and advanced schedules.
Supervisory Control and Data Acquisition (SCADA)	The monitoring and remote control of equipment from a central location using computers.	**MV90**	Metered load data.
Dispatchable Demand (DD)	An optional regime that allows wholesale electricity purchasers to participate in the spot market in a similar way as generators and therefore respond more efficiently to wholesale market conditions. A participant who wishes to participate in dispatchable demand must first apply to the System Operator for the load it wishes to be dispatched to become a 'dispatch-capable load station' (DCLS).	**Dispatch-Capable Load Station (DCLS)**	A device or group of devices that has been approved by the System Operator and is capable of being dispatched.

Schedule Name	WDS Week-Ahead Dispatch Schedule	PRSL Price Response Schedule Long	PRSS Price Response Schedule Short	NRSL Non Response Schedule Long	NRSS Non Response Schedule Short	RTD Real Time Dispatch	RTP Real Time Price	Final Pricing (FP) Interim/Provisional/Final
Schedule summary								
Primary purpose of Schedule	For market participants to view constraints and outages a week out from real-time and for power system security checks a week in advance.	Less frequent schedule to show the potential price impacts of signalled demand response over a longer horizon.	More frequent schedule to show the potential price impacts of signalled demand response over a shorter horizon.	Less frequent schedule used to check system security and test outages for the next 36 hours against a known generation pattern. It is the indicative schedule if no demand response is actioned.	More frequent but shorter horizon security checking. Indicative schedule if no demand response actioned. Can be used to dispatch from, and is the basis for RTD dispatch.	Actual dispatch schedule.	To keep market participants informed of close to real-time prices.	Final pricing is used to create final prices for reconciliation and settlement.
Schedule inputs - high level	Medium-term load forecast, outages from outage scheduler, constraints, rollover generation offers, rollover nominated bids, reactive profile for SFT.	Energy and reserve offers, medium-term load forecast, nominated bids, difference bids, constraints, reactive profile for SFT, outages from outage scheduler.	Energy and reserve offers, medium-term load forecast, nominated bids, difference bids, constraints, reactive profile for SFT, outages from outage scheduler.	Energy and reserve offers, medium-term load forecast, nominated bids, constraints, reactive profile for SFT, outages from outage scheduler.	Energy and reserve offers, medium-term load forecast, nominated bids, constraints, reactive profile for SFT, outages from outage scheduler.	Energy and reserve offers, instantaneous SCADA data, pre-solve deviation for the next five minutes, constraints.	Energy and reserve offers, SCADA load for the previous five minutes, constraints.	Actual metered load, constraints, energy and reserve offers.

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Schedule Name									
SPD INPUTS - Details									
Initial MW		N/A - as ramp rate is 9999	Uses unit sample (at start of trading period) for 1st interval, then previous cleared MW for subsequent intervals	Uses unit sample (at start of trading period) for 1st interval, then previous cleared MW for subsequent intervals	Uses unit sample (at start of trading period) for 1st interval, then previous cleared MW for subsequent intervals	Uses unit sample (at start of trading period) for 1st interval, then previous cleared MW for subsequent intervals	Uses current MW	Uses MW at start of 5 min period.	Uses unit sample for start of each trading period
Offers									
Energy Offers – incl. ramp rates		Ramp rates are set to 9999 for WDS	Energy offers are offered in up to 5 tranches. The energy offer includes up ramp rate (MW/h), down ramp rate (MW/h), MW Max, MW price ($/MWh), MW quantity.						
Reserve Offers		Rolled over offers are used where real offers do not exist	Reserve offers are offered in up to 3 tranches. There are 2 classes of reserves - Fast Instantaneous Reserves (FIR) and Sustained Instantaneous Reserves (SIR) (sometimes referred to as 6s and 60s reserves respectively). The 3 reserve offer types are Interruptible Load (IL), Tail Water Depressed Reserve (TWD) and Partially Loaded Spinning Reserve (PLSR). Reserve offer includes MW price, MW quantity, reserve class, PLSR %.						
Bids			Bids - see island load. Nominated bids are offered in up to 10 tranches. Difference bids are offered in up to 10 tranches (5 positive, 5 negative)						
Island Load									
Conforming GXPs		Load Forecast	Load Forecast +/- cleared difference bids	Load Forecast +/- cleared difference bids	Load Forecast	Load Forecast	Island load = generation - losses + pre-solve deviation	5min average of actual load from SCADA from previous 5min period	MV90 metered load
Non-conforming GXPs		The sum of the nominated bid quantities or default value where no bid	Cleared nominated bids	Cleared nominated bids	The sum of the nominated bid quantities	The sum of the nominated bid quantities	The sum of the nominated bid quantities are used to determine non-conforming load at the bus level		
Dispatch Capable Load Station (DCLS)	Dispatchable Demand	Cleared Dispatchable Demand (DD) bids					The sum of the DD bid quantities	Cleared DD bids	Cleared DD
	Non-Dispatchable Demand	Sum of Dispatchable Demand (DD) bid quantities						5min average of actual load from SCADA from previous 5min period	MV90 metered load
Network Model		All schedules use the SPD network model with overrides and accepted market outages.							
Constraints		Security constraints (temporary and permanent) are applied to all SPD schedules. These are also referred to as branch (group) constraints and are published on WITS if they are ≥ 85% of their limit.							
Intermittent Generation Information		Up ramp = 9999 Down ramp = 9999	Uses the latest intermittent generation offers. Within 2 hours the intermittent generator must provide revised offers based on actual output	Uses the latest intermittent generation offers. Within 2 hours the intermittent generator must provide revised offers based on actual output	Uses the latest intermittent generation offers. Within 2 hours the intermittent generator must provide revised offers based on actual output	Uses the latest intermittent generation offers. Within 2 hours the intermittent generator must provide revised offers based on actual output	Offered MW = 9999 Up ramp = 0 Initial MW = SCADA current MW This has the effect of clearing generation to the current MW output	Offered MW = 9999 Up ramp = 0 Initial MW = SCADA previous 5 min average	Intermittent Generation offers are excluded from final pricing. Intermittent generation is modelled as negative load (provided through MV90 data)
Reserve Requirements Risk adjustment factors (RAFs) Risk Offsets		Rolled over reserve requirements are used	Uses reserve requirements from latest RMT solves	Uses reserve requirements from latest RMT solves	Uses reserve requirements from latest RMT solves	Uses reserve requirements from latest RMT solves	Uses requirements from latest RMT solve in the previous trading period	Uses requirements from latest RMT solve in the previous trading period	Uses latest requirements at the start of the trading period
Frequency of Schedule *From*		Start of next day (00:00)	Now	Now	Now	Now	Now	5 mins ago	00:00 yesterday
To		Start of next day (00:00) + 6 days	Now + 71 trading periods	Now + 7 trading periods	Now + 71 trading periods	Now + 7 trading periods	Now + 5 mins	Now	00:00 today
Produced		Every 24 hours (at 01:30)	Every 2 hours (even hours)	Every 30 mins	Every 2 hours (even hours)	Every 30 mins	Every 5 mins - runs 1 min before start of 5 min period or when triggered	Every 5 mins	Daily (at approx 07:30)