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Keeping the energy flowing

3 September 2013

Submissions
Electricity Authority
Level 7, ASB Tower
2 Hunter Street
Wellington

By email: submissions@ea.govt.nz

Dear John

Modified design of dispatchable demand

Thank you for the opportunity to submit on the consultation paper *Modified design of dispatchable demand,* published on 23 July 2013. Our interest in this matter is primarily as System Operator.

Support the modified design

We consider the Authority, with support from the System Operator, has done well to reduce implementation costs for the dispatchable demand policy. The modified design provides a practical alternative to the Original DD Design; it can be implemented sooner than the Original Design and it makes DD available to more participants at the outset.

We consider that periodic reporting on participation and payments by the Authority would assist in understanding and evaluating the ongoing effectiveness of the regime in meeting this specific section 42 obligation.

We respond to the consultation questions at Appendix A. Appendix B contains a memorandum prepared by the system operator to assist industry understanding of dispatchable demand functionality and possible future development. Drafting comments follow at Appendix C.

If you have any questions about our submission please contact me jeremy.cain@transpower.co.nz, 04 590 7544.

Yours sincerely

Jeremy Cain
Chief Regulatory Advisor

Appendix A – Consultation responses

Table 1 - Responses to Questions

Question No.	Question	Response
1	Do you agree with the objective of the proposed amendment? If not, why not?	Yes. We consider that the modified design satisfies the Electricity Industry Act section 42 requirement *to implement a mechanism to allow participants who buy electricity on the wholesale market to benefit from demand reductions*, but at lower cost than that of the original design.
2	Do you agree with the estimated benefits of the proposed Modified DD Design?	We note that the benefits of the modified design accrue when there are a greater number of participants. We consider that the changes to the design have increased the likelihood of greater participation.
3	Do you agree the benefits of the proposed amendment outweigh its costs?	We note that the NPVs across both temporal and scenario aspects are higher for the MDD than for the original design. We consider the Authority, with support from the System Operator, has done well to reduce implementation costs for the dispatchable demand policy.
4	Do you agree co-optimisation should be reconsidered after the proposed Modified DD Design has "bedded-in"?	Please refer to Appendix B for further comment from the System Operator on this issue.
5	Do you agree the proposed amendment is preferable to the other options? If you disagree, please explain your preferred option in terms consistent with the Authority's statutory objective in section 15 of the Electricity Industry Act 2010.	Yes.
6	Do you agree the Authority's proposed amendment complies with section 32(1) of the Act?	Yes.
7	Do you have any comments on the drafting of the proposed amendments?	Please refer to Appendix C.

Appendix B – System Operator memorandum

(See next page)

MEMORANDUM

From: Doug Goodwin, System Operator Development Manager

Subject: Modified design of dispatchable demand

Introduction

The System Operator has worked collaboratively with the Authority in its role as a service provider to make operational the Section 42 dispatchable demand (DD) initiative. This memo provides context that is intended to complement the high level Modified DD design. The context is addressed in three areas, operational clarification, process clarification and design clarification.

Operational clarification

The consultation paper focuses on the high level design of the Modified DD Design. Beneath this high level design are a number of operational design aspects that the consultation did not focus on but that we consider helpful to comment on for context. These comments are outlined below.

1. Dispatchable Demand/Interruptible Load co-optimisation

If co-optimisation were to be reconsidered then the information provided in the consultation document should be placed in the following context.

- Neither the design of co-optimisation nor its objectives have been fully specified. The obvious cost minimisation or profit maximisation co-optimisation objectives sought by individual purchasers cannot be reconciled in principle or practice across market, system security and retail domains. A broad market debate will be necessary to discuss this issue.

- The SO investigation into co-optimising DD and interruptible load (IL) referred to in the report provided a limited examination of the issue only; namely determining whether it would be possible to manage DD and IL at the same GXP. The option investigated was a selection mechanism to ensure that SPD did not clear more IL than is available. 'True' DD/IL co-optimisation would require both products to be dispatched from the same schedule and agreement on the co-optimisation objectives.

- Only some IL providers would benefit from such a co-optimisation service as providers would need to modify their processes so that the IL is offered at the GXP where it is delivered. This may not suit all IL providers who take advantage of the flexibility to aggregate IL offers from across their network and submit a single offer on an island basis (rather than multiple offers at multiple GXPs).

- The Modified DD Design still allows a purchaser to participate in both DD and IL markets with the same load, but requires the purchaser to ensure that they can deliver both the IL and DD dispatched.

- The SO estimate for co-optimisation was provided as an order of magnitude estimate (-25%/+75%) and is subject to change if more detailed investigation is required.

2. More than one Non-Responsive Schedule (NRS)

Dispatch instructions are taken from the NRS. Where there are operational reasons for the system operator to run more than one NRS in a trading period the WITS system will flag the most recent schedule prior to the start of the trading period. This is the one that dispatch purchasers should take their instructions from.

3. Provision of finalised metering data

Schedule 13.8, clause 4 lists the factors that the system operator must consider when approving devices to be a dispatch-capable load station. It should be noted that one of the key requisites under subclause (e) one of the other matters relevant, is the applicant's ability to supply finalised metering data on a daily basis to the grid owner. The system operator approval will require that this condition is met.

4. Managing Grid Emergencies

Schedule 8.3 Technical Code B specifies how Grid Emergencies (GE) are handled. This part of the Code has not been touched by DD as under GE conditions the market is effectively suspended in favour of security. DD will be handled under a GE as follows:

- Dispatch Capable Load Station (DCLS) load (whether dispatchable or non-dispatchable) will be treated the same as all other load under a GE

- during a GE the demand management instructions/allocations are determined by the co-ordinator and issued verbally or in writing using the Load Shed and Restore (LSR) tool

- if a distributor requires DCLS load to be shed under a GE, then it will be shed (regardless of what was cleared in the Non Response Schedule (NRS)/dispatch notification)

- if this happens, the DCLS would be expected to revise its bids (for future trading periods) to reflect this demand curtailment

- the DCLS should modify any bids to be non-dispatchable for the duration of a GE. This is because the DCLS may be turned off anyway (by the distributor), and this MW curtailment could be in conflict with any dispatch notification

- the DCLS cannot increase load for the duration of a GE unless otherwise advised.

There are two further points to note.

i. A GE notice (GEN) does not mean that all DCLSs revert to non-dispatch bids. Under a GEN, the intention is to apply this rule to affected Grid Exit Points with an associated DCLS.

ii. If a GE is declared part way through a trading period, load will be managed accordingly at that DCLS (as described above). However they will still be treated as per the DD design in final pricing with their dispatchable bids being part of the initial conditions for that trading period in final pricing. The DCLS would also be eligible for any constrained on/off entitlements. However subsequent bids will have to be revised to non-dispatch bids until the GEN affecting that DCLS is ended.

Process clarification

5. Changes to the policy statement

The Code amendments in Appendix C of the consultation document cover changes to Parts 1, 13, 14 and 15. The system operator will review what consequential changes are needed to the Policy Statement once the final form of the DD amendment is known. The Policy Statement changes will be consulted on at a later date.

Design clarification

6. Inclusion of a diagram in the Code as a guideline

Although the DD provisions now proposed for the Code accurately reflect the new design, it may be difficult for a participant who has not been closely involved in the development of the DD provisions to understand them. To address that the Authority might consider publishing a DD guideline, possibly in diagrammatic form, explaining in a straight forward way:

- the different types of GXP

- the different types of load

- the types of bid that may be made for the different GXP and load types

- the different schedules that the bids are inputs to

- how dispatch instructions are formulated based on those schedules and how they will be issued, and

- dispatch purchaser's entitlements to constrained on and off compensation.

This diagram could be marked as non-binding but would help provide further clarity of the process.

Appendix C – Drafting comments

Clause	Comment	Suggested drafting changes
1.1 Interpretation section.	Some definitions are out of alphabetical order e.g. "dispatch purchaser".	See comment.
paragraph (b) of definition of constrained off compensation	"by purchasers" is redundant.	See comment.
Definition of metering situation	It should be noted that under the revised definition of metering situation, the non-provision of finalised metering data for any dispatch load station will trigger a metering situation, regardless of the size of the dispatch load station. This highlights the importance of dispatch load stations having adequate systems and processes in place to provide timely metering information. An alternative to all missing data causing a metering situation would be to apply a threshold. This could be based on the size of the load, or GXP, or on specific locations nominated by the system operator similar to the way the reconciliation manager assesses sites on annual volume.	N/A
13.3A	There needs to be a provision in the code that enables a purchaser to decide they no longer want their device or group of devices to be a dispatch-capable load station. i.e. the approval could be revoked upon notification by the purchaser. We propose a notice period of 10 business days, or less if agreed with the system operator.	See comment. We suggest such a provision should be included in clause 13.3A and schedule 13.8.
13.3B	The reference should be to clause 11 of schedule 13.8 rather than clause 12.	
13.3B (2)	If there is a material change to the information, 5 business days may be too short. We would like this to be increased to 10 business days, or less if agreed with the system operator.	See comment.
13.7	Need to add a hyphen to "dispatch-capable load station" in	See comment.

Clause	Comment	Suggested drafting changes
	accordance with the definition. The hyphen is missing from the heading and from 13.7(2).	
13.7AA	Apply hyphens consistently with the definition of non-dispatch-capable load. An extra hyphen needs to be removed from the title to clause 13.7AA. Extra hyphens need to be added (in two places) in subclause 13.7AA (2) (b). For consistency with 13.7, change "for each trading period of the schedule period" to "for each trading period in the schedule period". In subclause 2(a) remove the comma at the end of "each trading period of the schedule period". In subclause 2(b) remove the comma at the end of "submit to the system operator for a trading period".	See comment.
13.7AA(2)	The introductory words do not work with subclause (b) because clause 13.8A only applies to nominated bids.	Separate subclause (2) (b) into its own subclause (3).
13.8A(4)(b)	There is a hyphen missing from "non-dispatch capable load".	See comment.
13.20(1)	"at a GXP" is redundant.	See comment.
13.40.	The reasonable estimate requirements in the listed clauses are not conjunctive. The "and" listed should be an "or" list.	See comment.
13.59(c)	It may be clearer to keep the words "quantity of" to align with the existing drafting.	c) each **non-response schedule** prepared by the **system operator** must specify the expected <u>quantity of</u>
13.71, 13.76 and 13.78	The system operator has reviewed the versions of these clauses as provided in the consultation paper. If it is decided to bring the Allocation of constrained-on and constrained-off amounts to the system operator amendment into effect after the dispatchable demand amendment these clauses could change, in which case the system operator will need to review the proposed dispatchable demand version of these	N/A

Clause	Comment	Suggested drafting changes
	clauses.	
13.72(3)(b)	No change to this clause is proposed but we note that despite 13.72(3) (b) the system operator will issue a dispatch instruction to a dispatch load station for every trading period, even if the instruction is within 1 MW of the instruction for the previous trading period.	N/A
13.73 (b) & (l)	Subclause (l) is redundant. The dispatch of interruptible load is covered under subclause (b). The disconnection and restoration of demand occurs under Part 8.	
13.73(1)(i)	Minor wording change proposed for clarification.	…does not exceed the relevant maximum reserve risk notified by the **system operator** for the North Island or the South Island…
13.76(4)	"By 16 hours" should be "By 1600 hours".	See comment.
Proposed new clause	Because no acknowledgement of dispatch instructions to dispatch purchasers is required, and because such dispatch instructions will be made available for viewing by dispatch purchasers rather than be "pushed" to them, clarity is required about when such a dispatch instruction will be considered issued. Our proposed drafting addresses this issue in relation to instructions to dispatch purchasers but we note the clause could be easily extended, for completeness, to the instructions issued to generators.	13.79A The **dispatch instructions** required to be issued by the **system operator** to **dispatch purchasers** under clause 13.76(1) must be transmitted through the electronic facility contained in the **information system**. [Also, required is a corresponding change to the information system definition.]
13.81(1)(a)	Delete "to 13.80" and replace "send" with "issue" (for consistency).	See comment.
13.82(2)(c)	We query the rationale behind limiting this clause to co-generators as this change is not related to dispatchable demand. The current version of this clause, in conjunction with clause 13.86, provides guidance on thresholds for dispatch compliance. We note it is proposed to introduce a 1	Revert 13.82c) and 13.86 to their current versions.

Clause	Comment	Suggested drafting changes
	MW threshold into clause 13.72(3) (b), which we support.	
13.82(4)	"dispatch instructions" should be singular.	See comment.
13.82(5)	The redrafting of this subclause has introduced a double negative that potentially invalidates most of the subject dispatch instructions. The "not" in the introductory words should be "only" and the four subclauses should be made into positive statements.	See comment.
13.100(a)	The reference to Technical Code B should be removed and replaced with a simple reference to the formal notice issued by the system operator (compare clause 13.99A (1) (b) (i) and (ii)).	See comment.
13.138A(3)	"dispatch purchaser" should be "dispatchable load purchaser" in both places where it appears.	See comment.
New clause 13.138A (4) proposed	From time to time the system operator may have a need for metering information with respect to dispatch load stations, in order to follow up on potential dispatch non-compliance issues. We propose the code should allow for the system operator to be provided this information on request.	13.138A (4) A **dispatchable load purchaser** must provide a copy of the **half-hour metering** information it has provided under subclause (2) to the **system operator** if requested by the **system operator**.
13.138B	Potentially a nominated dispatch bid could be submitted then cancelled or revised to be a non-dispatch bid prior to the start of the trading period. The list should show only those trading periods where there was a nominated dispatch bid in the final information provided for the trading period.	Replace "was a **nominated dispatch bid**" with "is a **nominated dispatch bid**".
13.141(1A)	We note there is a new requirement to provide the information in the form specified by the pricing manager. Our project costs are based on an assumption that the pricing manager will not seek to change the form from the one currently implemented.	No change proposed.
13.166	The reference should be to 13.154(1A) (b), not 13.154(1) (b).	See comment.

Clause	Comment	Suggested drafting changes
13.189A	The title should refer to dispatch load stations rather than dispatch-capable load stations. If a dispatch capable load station is not dispatchable then it will not have a cleared quantity in the final pricing schedule.	**13.189A Pricing manager to give to clearing manager information about <u>dispatch load stations</u> from schedule of final prices.**
13.208(c)	The wording used in clause 13.199(c) should be used here because the relevant point of connection for a dispatch purchaser will be a GXP (not a GIP).	See comment.
Schedule 13.3 1(2A)(a)	We propose to clarify that this clause relates to trading periods other than the first trading period of the schedule. For the first trading period of the price-response schedule and non-response schedule (for which there is no previous trading period), ramp rates are applied in conjunction with the instantaneous MW injection at the start of the trading period.	"Schedule 13.3 1 (2A)(a) a **price-responsive schedule** and **non-response schedule** must take into account, <u>for **trading periods** other than the first **trading period**</u>... 13.58A (1) (i) in relation to the first **trading period** of the schedule, the output levels of each **generator** at the start of the **trading period**. 13.58A (2) (h) in relation to the first **trading period** of the schedule, the output levels of each **generator** at the start of the **trading period**.
Schedule 13.3, 6(a)	Replace "under clause 13.63," with "under subpart 1 including". Insert a comma after 13.71(b). Add "information provided by a dispatch purchaser" after "nominated dispatch bid".	See comment.
Schedule 13.3, 9(c)	Add "the" before "constraint".	See comment.
Schedule 13.3, 11 and 12	For consistency with clause 9A, the introductory words "The constraints for the purpose of clause 9(x) are" could be added to these clauses.	See comment.
Schedule 13.3, 13(4) and 15(e)	In 15(e), replace "pre-dispatch schedule that became the dispatch schedule", with "non-response schedule". We note that 13(4) also relates to the adjustments to be used in the schedules of prices but is potentially in conflict with 15(e). We propose to merge these clauses into a revised 15(e).	Delete subclause 13(4). Replace subclause 15(e) with: "the latest adjustments that applied at the beginning of the **trading period** that were made to the **dispatch schedule** and the **non-response schedule**, which were required to

Clause	Comment	Suggested drafting changes
		meet the **dispatch objective** (clause 13 of schedule 13.3)."
Schedule 13.3 15 & 13.141	Schedule 13.3 clause 15 should include nominated dispatch bids. Compare with clause 13.141(1) (ca).	
Schedule 13.8 and Schedule 13.7	These schedules are out of numerical order.	Put schedule 13.7 before schedule 13.8.
Schedule 13.8	Need to indent "Subclauses".	See comment.
Schedule 13.8 4(1)(c)	In order to consider this risk the system operator will ask applicants for dispatch-capable load station status whether the load is ring-fenced. We also strongly recommend that there should be an obligation within the code that requires dispatch purchasers to not offset their load. This is a key requirement in order to realise the benefits of the dispatchable demand proposal.	13.82(6) A **dispatch purchaser** who has been issued with a **dispatch instruction** that changes the level of load for a **dispatch load station** must not offset that **dispatch instruction** by making changes in **demand** in the same **trading period** from other load controlled by the **dispatch purchaser**.
15.15	This clause does not reflect the most recent version of the code as amended by the Information Flows Code Amendment 2013.	Use the current version of this clause (13 June 2013 version).
15.38(1A)	Replace "dispatch load purchaser" with "dispatchable load purchaser".	
15.20B(4)	This clause needs to clearly show that the Authority's direction is given to the specific dispatchable load	(4) If the **Authority** makes a direction under subclause (3), the **reconciliation manager** must apply the values as **loss factors** to the relevant **dispatchable load information** for all **reconciliation periods** during which the direction applies.