Submitter:	New Zealand Steel

NZ Steel comments are from the perspective of a load connected asset owner.

Question	Comments
Q1. Do you agree that failing to provide key information will have an impact on the commissioning of an asset, power system security and the system operator's ability to meet the PPOs and dispatch objective?	Key information that could impact the SO's ability to meet system requirements should be required before commissioning of an asset that may impact the operation of the power system. Transpower as an organisation has the responsibility to ensure it is clear to connected parties which assets (class and size) may impact the power system. Also, for parties engaging with Transpower, that Transpower makes it is clear if this engagement is with Transpower as asset owner or with Transpower as the SO.
Q2. Do you agree with the proposal to mandate minimum time frames for the activities in Chapter 1 of the proposed CACTIS?	The connecting parties should expect a two-way requirement as to timing. An asset cannot be commissioned until the SO has had sufficient time to evaluate information provided. Likewise, there should be a requirement that the SO will not cause undue delay. Given the divergence and complexity of assets to be commissioned and localities on the grid, a one-rule fits all mandated timeframe is inappropriate. While both connection parties and the SO are entitled to a clear understanding as to timing expectations, and this is related to complexity, the pre-commissioning Code is too prescriptive. It is sensible to have defined times for post commissioning reporting.
Q3. Do you agree with the proposed time frames for asset owners to submit a commissioning plan and for the system operator to review them?	Refer our comments to Q2. There is lack of clarity as to which assets require a commissioning plan. The code defines Asset as: **asset** means equipment or plant that is connected to or forms part of the **grid** and, in the case of Part 8, includes equipment or plant that is intended to become connected to the **grid** and equipment or plant of an **embedded generator** Yet the draft CACTIS states: The **asset owner** must provide a **commissioning plan** for an **asset** in the following situations: (a) when the **asset** is to be **electrically connected** to a **network**; and Definition is also lacking for "…connected to the grid…" and "…connected to a network…". All electrical equipment is

	connected to the grid (and usually some form of network). The question relates to how direct or remote the connection is. Clause 2.3(b)(iv) of CACTIS requiring a Commissioning Plan for "…changes…" of "any capability or rating of the asset" seems to contradict clause2.4 where an "asset owner must contact the system operator for advice" IF it thought the asset change may impact the system operation.
Q4. Do you agree that requiring asset owners to use a standard commissioning plan template would help streamline the preparation and review process?	The concept is sensible. However, our concern is given the wide range and type of equipment to be connected, and varying size and characteristics of connection points, both to the grid and networks, we doubt a one-rule fits all approach will be workable.
Q5. Do you agree with the proposed time frames for asset owners to submit asset capability statements at the planning, pre-commissioning, and final stages of the commissioning process, and for the system operator to review them?	Refer our comments to Q2
Q6. Do you agree that formalising the asset capability statement assessment requirements will provide clarity for asset owners?	Clause 3.3 of CACTIS provides: For the purpose of clause 2(5) of **Technical Code** A of Schedule 8.3 of the Code, the **asset owner** must provide **asset capability statements** for: (a) each **asset** that is, or is proposed to be, **electrically connected** to, or part of, a **network**; and Are we correct for grid and network connected load, that where the grid connection is via Transpower breakers and, this requirement is restricted to the likes of STATCOM type equipment, then only grid (not network) connected reactive power devices >5Mvar are caught within this requirement? Extracts from the Electricity Participation Code, Part 8, Appendix A, Table A3: Each **connected asset owner** must provide the indications and measurements shown in Table A3 in respect of **assets** connected to, or forming part of, the **grid**.

	[5] Required only if reactive plant has a maximum continuous rating of greater than 5 Mvar. If this is the case, then in formalising this requirement it will be more helpful to asset owners if the full context is provided in CACTIS (or as a supporting/guidelines document).
Q7. Do you agree with the proposal to formalise requirements for asset owners to provide urgent or temporary changes to asset capability statements?	Yes, where this could reasonably be expected to have an impact on operation of the Power System.
Q8. Do you agree with the proposed time frames for asset owners to submit m1 and m2 models, and for the system operator to review them?	Refer comments to Q2 for m1 requirements. We support timeframes for m2 requirements.
Q9. Do you agree that the updated modelling requirements are necessary to reflect the increasing complexity and changing generation mix within the New Zealand power system?	We understand the challenges that come with increased complexity of the power system and support modelling information being available. However, again we note this should be what is appropriate for the circumstance and not just one-rule fits all approach.
Q10. Do you agree that the system operator needs TSAT and PSCAD software models to conduct the studies needed to maintain power system security and meet the PPOs?	We are not sufficiently informed to answer this.
Q11. Do you agree with the proposed time frames for asset owners to submit a final connection study report,	Refer our comments to Q2.

and for the system operator to review it?	
Q12. Do you agree with the proposed approach of using RMS studies for scenario screening and EMT studies for detailed fault ride through analysis of IBRs?	We are not sufficiently informed to answer this.
Q13. Do you agree with the proposal to require asset owners to repeat fault ride through studies when control system parameters are modified during or after commissioning?	We are not sufficiently informed to answer this.
Q14. Do you support the proposed process for accessing encrypted models from other asset owners when needed for fault ride through studies?	We understand the need for technical evaluation. Where there is reluctance on a party to provide access to a model with their data, could that party opt to fund an independent third-party to undertake the modelling?
Q15. Do you agree with the proposed time frames for asset owners to submit a commissioning plan and for the system operator to review it?	Refer our comments to Q2.
Q16. Do you agree with the proposed time frames for asset owners to submit a final engineering methodology, and for the system operator to review it?	Refer our comments to Q2.
Q17. Do you agree with the proposed testing	We are not sufficiently informed to answer this.

requirements for wind, solar photovoltaic and BESS technologies?	
Q18. Do you agree that the system operator needs the additional data identified in this section to maintain power system security and meet the PPOs?	Specific requirements for specified assets are listed in table 1 of the consultation document. For a "Connected Asset Owner" the requirements for "controllable load" are detailed. For a grid direct-connect site such as NZ Steel Glenbrook, who does not have "Controllable load" that fits within the Code definition, our understanding is we will not be required to provide data.
Q19. Do you agree with the proposal to use high-speed monitoring data to verify asset performance and reduce the need for routine testing of generating stations between 10 MW and 30 MW?	No comment
Q20. Do you agree with the data quality requirements as described in Chapter 9 of the proposed CACTIS for high-speed monitoring and operational reporting?	Is consideration being given to this technology being used to manage AUFLS requirements to replace the current scatter-gun 4 fixed-block requirement?
Q21. Do you currently have the ability to provide the additional information proposed in the draft CACTIS? If not, when do you expect to be able to meet these requirements?	This question cannot be answered until there is a clearer understanding of what additional information is required for a load customer and under what circumstances. Our conclusion for our sites, is the requirement is restricted to any grid connected reactive power device >5Mvar. What is not clear is the meaning of connected to the grid. – all devices are connected in some way, either direct or mostly indirect.