19 October 2020

Merryn York
Chair
Australian Energy Market Commission (AEMC)
PO Box A2449
SYDNEY SOUTH NSW 1235

Dear Ms. York

Coordination of Generation and Transmission Investment (COGATI) Review – Interim Report

Hydro Tasmania appreciates the opportunity to respond to the AEMC's COGATI Interim Report. Hydro Tasmania is Australia's largest producer of renewable energy, and is an active participant and contributor to the energy market reform agenda.

The National Electricity Market (NEM) is undergoing significant transition through the rapid uptake of renewable energy sources, and the retirement of ageing thermal generation. This important transition of our sector is driving a broad and ambitious market reform agenda in Australia. We support the AEMC's efforts to consider ways that market and regulatory frameworks are being set to support this transition, and avoid creating unnecessary or complex 'barriers to entry' for future generation assets.

The proposed COGATI access reforms are at a fundamental level, with far-reaching impacts across various aspects of the NEM. As previously stated, we consider it critical that the reforms that impact market fundamentals, such as COGATI, are proven to be fit-for-purpose against the potential future market frameworks being considered in the Energy Security Board's (ESB) *Post-2025 Market Design* process. While Hydro Tasmania acknowledges that the COGATI reforms are now recognised as a 'market design initiative' under the ESB's work stream, it remains unclear if and how those potential future market reforms will work cohesively together.

As members of the Australian Energy Council and the Clean Energy Council, we are also broadly supportive of the issues and observations raised in their respective submissions. Like a number of other market participants, Hydro Tasmania remains concerned over the proposed COGATI reforms. These concerns are outlined below.

Assessment framework

Hydro Tasmania appreciates the AEMC's initiative in engaging NERA Consulting to undertake modelling of the proposed COGATI reforms. Cost-benefit modelling is essential to understanding the value of

such major market reforms. Noting the relative importance of this analysis, it is critical that the modelling process is appropriately transparent to enable robust scrutiny before being accepted as justification for the progression of this reform. In the event that commercially sensitive information cannot be shared, **Hydro Tasmania considers that, at a minimum, the inputs and assumptions provided to NERA to guide their analysis should be open to scrutiny.** We encourage the AEMC to disclose all non-sensitive information including the inputs and assumptions provided to NERA.

Constraint management

Hydro Tasmania considers significant concerns remain regarding the detailed design of the proposed COGATI reforms.

We consider that the need to effectively manage non-thermal constraints (primarily system security and stability constraints) is a more significant and pressing issue requiring resolution to support the transition of the energy market compared to the risk of thermal constraints. Without appropriately addressing non-thermal constraints, COGATI is likely to suffer from significant revenue inadequacy, which would greatly undermine the intended 'firmness' of financial transmission rights.

For example, in our analysis of the top 30 binding constraints in the NEM during the last quarter (**see Appendix I**), we observe that **only two of the top 30 constraints in Q3 2020 would be addressed by the proposed COGATI reforms.**

Alternative approaches

Hydro Tasmania believes that **a combination of the following proposals could help achieve the objectives of the COGATI reforms** (i.e. reducing congestion risks for generators, enhancing locational investment decisions, and improving dispatch efficiency), as well as addressing a broader suite of constraints in the NEM. A combination of the below proposals could meet these objectives by better utilising existing resources and infrastructure at substantially less complexity, cost and risk for market participants:

1. **Synchronous Service Markets**

   Voltage and stability constraints normally feature passive 'gatekeeper' generators or network elements whose online status is treated as a defining input for limit setting of others, whilst its own output is unaffected by the constraint. If those gatekeepers had an incentive to come online they would expand the network capacity for others, and in doing so reduce overall costs for consumers. Providing such an incentive is the subject of Hydro Tasmania's *Synchronous Services Market* rule change proposal. For example, Hydro Tasmania notes that of the most commonly binding constraints in Q3 2020 (Appendix I), 40% would be improved with implementing this rule change, which is substantially greater than what would be addressed by COGATI (7%).

2. **Increase use of runback schemes**

   Transmission limitations of other (thermal) constraints could be improved through the use of runback schemes. A relatively weak Tasmanian power system contains a runback scheme on every major transmission corridor. Runback schemes approximately double the capacity of Tasmania's transmission infrastructure through the use of high speed protection coordination between the network and generators. This approach avoids the need to cater for the potential

loss of transmission lines (N-1) upfront. Hydro Tasmania encourages further investigation of ways that these schemes could be more commonly adopted to alleviate thermal constraints in other transmission corridors across the NEM.

3. **Improved information sharing for investors**

   Hydro Tasmania notes that enhanced information provision has been the focus of several rule changes/process improvements recently, including the *Transparency of New Projects* rule change that was finalised in October 2019 and the development of the Integrated System Plan. Hydro Tasmania supports processes that can increase information sharing and transparency of new generation/transmission investments resulting in more effective signals for new investment. This can help provide a better basis for considering the issue of congestion for investment decisions.

Hydro Tasmania has appreciated the opportunity to provide input through the AEMC's technical working group and throughout this consultation process. Hydro Tasmania would welcome the opportunity to discuss the alternative approaches noted above and to work with the AEMC in ways of addressing the COGATI objectives in incremental ways in support of the NEM transformation. If you wish to discuss any aspect of this submission, please contact John Cooper ((03) 6240 2261 or John.Cooper@hydro.com.au).

Yours sincerely,

Andrew Catchpole
Chief Strategy Officer

Appendix I – Most frequently binding constraints of Q3 2020

To assess the effectiveness of the proposed COGATI reforms, Hydro Tasmania has conducted analysis of the top 30 binding constraints in the NEM during the last quarter (Q3 2020).

Hydro Tasmania notes that the design and modelling of COGATI envisages that: (1) a constraint affects multiple generators; and (2) affected generators are co-located, competing for access to a shared transmission line.

However, as observed in the table below, 80% (or 24) of these constraints fail the first test, as they only result in one generator being constrained off. From the remaining 20% (or six) constraints, all but one were voltage or stability constraints, despite COGATI consultation not focusing on them. Only 7% of constraints analysed passed both the tests, because voltage and stability constraints typically affect generators in multiple locations. However, as noted in our submission, this can also create revenue adequacy issues, at the detriment of FTR 'firmness'. This will undermine the efficacy of the entire reform.

Most commonly binding	Constraint Name:	Hrs binding Jul-Sep 2020	i) Number of constrained generators?	ii) Are all generators collocated?	Addressed by **COGATI**?	Addressed by **Synchrnous Services Market**? (contains unincentivised gatekeepers)
1	Q_NIL_STRGTH_MEWF	893	1	-	No	**Yes**
2	SVML_ZERO	594	1	-	No	no
3	Q_NIL_STRGTH_HAUSF	480	1	-	No	**Yes**
4	N_X_MBTE2_B	449	1	-	No	no
5	#VIC1_E_20200811	413	1	-	No	no
6	N^^V_NIL_1	299	Multiple Generators	No	No	**Yes**
7	#BULGANA1_E	294	1	-	No	no
8	T_MRWF_FOS	283	1	-	No	no
9	#PPCCGT_D_E	267	1	-	No	no
10	S:V_PA_SVC_420	267	1	-	No	no
11	Q_NIL_STRGTH_SMSF	265	1	-	No	**Yes**
12	S_NIL_STRENGTH_1	251	Multiple Generators	No	No	**Yes**
13	N^N-LS_SVC	238	1	-	No	no
14	V_YW_134_580	227	1	-	No	no
15	Q_STR_333104_SMSF25	196	1	-	No	**Yes**
16	Q_STR_333104_MEWF25	196	1	-	No	**Yes**
17	Q_STR_333104_HASF25	196	1	-	No	**Yes**
18	V_BANSF_BBD_60	178	1	-	No	no
19	Q^^NIL_QNI_SRAR	167	1	-	No	**Yes**
20	#YENDWF1_E	167	1	-	No	no
21	#TORRB2_D_E	161	1	-	No	no
22	T::T_NIL_1	156	Multiple Generators	Yes	**Yes**	**Yes**
23	N^^V_NIL_YW134_N-2	128	Multiple Generators	No	No	**Yes**
24	V^^N_NIL_1	123	Multiple Generators	No	No	**Yes**
25	#TORRB1_D_E	109	1	-	No	no
26	V_MURRAWRWF_MAX	104	1	-	No	no
27	V_MURRAWRWF_FLT_90	98	1	-	No	no
28	NSA_Q_GSTONE34_150	92	1	-	No	no
29	V_T_NIL_FCSPS	91	1	-	No	no
30	V>>V_NIL_9	88	Multiple Generators	Yes	**Yes**	no