



6th July 2004

Mr Michael Chan
Senior Design Engineer
Ontario Power Generation Inc.
777 Brock Road
Pickering
Ontario L1W 4A7

Dear Mr Chan,

***ONTARIO POWER GENERATION Inc.: Pickering 'B' NGS
Power System Stabilisers on Units G5 to G8: Revise the Output Settings
Notification of Approval of the Connection Proposal***

CAA ID Number: 2004-EX201

Thank you for the information regarding your proposal to revise the output settings on the Power System Stabilisers of generating units G5 to G8, inclusive, from +20%/-6.6% to $\pm 5.5\%$, as shown in the attached Diagram.

We have reviewed the impact that this change would have the IMO-controlled grid and concluded that it would:

- slightly reduce damping
- not have a materially adverse effect on the reliability of the IMO-controlled grid
- not impose any restrictions on the output from Pickering 'B' NGS for operation within the normal scope of the operating security limits.

Since it has been concluded that these revised settings would have no adverse impact on the IMO-controlled grid, the IMO is therefore pleased to grant approval to complete the proposed change to all four generating units at Pickering 'B' NGS.

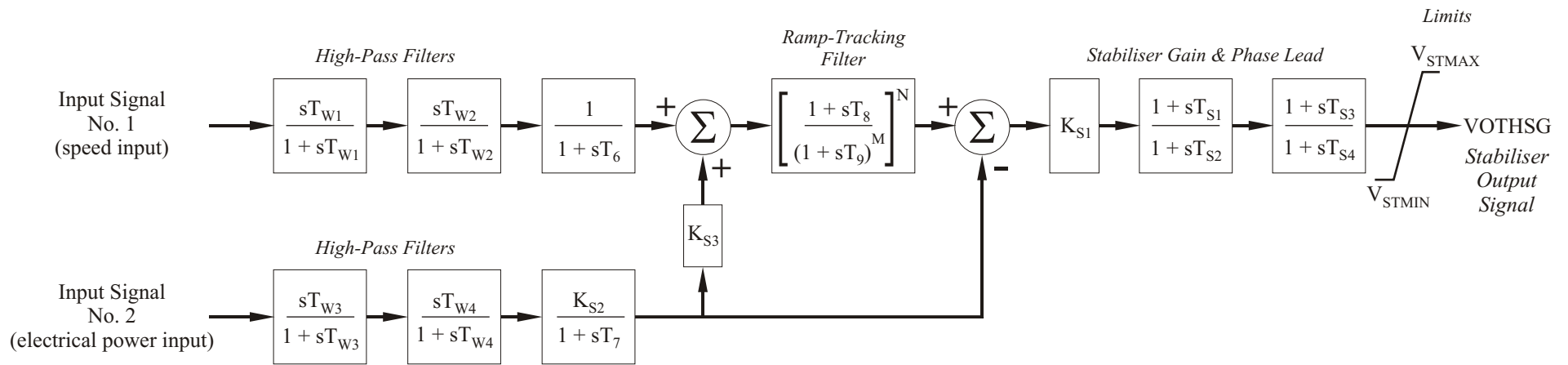
For further information, please contact the undersigned.

Yours truly,

Bob Gibbons
Manager – Long Term Forecasts & Assessments

cc: IMO Records

All information submitted in this process will be used by the IMO solely in support of its obligations under the Electricity Act, 1998, the Ontario Energy Board Act, 1998, the Market Rules and associated policies, standards and procedures and in accordance with its licence. All information submitted will be assigned the appropriate confidentiality level upon receipt.



Phase Lead time constant	T_1	0.16 sec
Phase Lag time constant	T_2	0.02 sec
Phase Lead time constant	T_3	0.16 sec
Phase Lag time constant	T_4	0.02 sec
Filter time constant	T_6	0.00 sec
Washout time constant	T_7	10.00 sec
Ramp-tracking filter time constant	T_8	0.30 sec
Ramp-tracking filter time constant	T_9	0.15 sec
Washout time constant	T_{W1}	10.00 sec
Washout time constant	T_{W2}	10.00 sec
Washout time constant	T_{W3}	10.00 sec
Filter time constant	T_{W4}	0.00 sec
Ramp-tracking filter order	M	2
Ramp-tracking filter order	N	4
Stabiliser Gain	K_{S1}	20
Gain	$K_{S2} (= T_{W2}/2H)$	1.129
Gain	K_{S3}	1.0
Output limits	$V_{STMAX} (pu E_{TREF})$	0.055
Output limits	$V_{STMIN} (pu E_{TREF})$	-0.055

**PSS2A Power System Stabiliser Model
(IEEE Dual-Input Stabiliser)**

**Parameters supplied for use on all
four Units at Pickering 'B' NGS**

DIAGRAM 1

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