Aurora

INTERIM POLICY STATEMENT

HARMONIC CONTROL

POLICY

All applications for new and modified connections to the Aurora Energy Limited network must comply with the requirements of IEEE 519-1992 *"IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems"*.

This interim policy statement will remain in force until Aurora's Harmonic Control standard is issued and/or appropriate amendments are made to the Network Connection Requirements (NS5.1) policy. Further requirements to that below are likely to be specified in the new standard; however the harmonic limits under this Interim Policy Statement are as follows:

HARMONIC LIMITS UNDER THIS INTERIM POLICY STATEMENT

The following table specifies the maximum harmonic current distortion as a percentage of I_L (odd harmonics).

I_{SC} / I_L	<11	$11 \leq h < 17$	$17 \leq h < 23$	$23 \leq h < 35$	$35 \leq h$	TDD
<20*	4.0	2.0	1.5	0.6	0.3	5.0
20-50	7.0	3.5	2.5	1.0	0.5	8.0
50-100	10.0	4.5	4.0	1.5	0.7	12.0
100-1000	12.0	5.5	5.0	2.0	1.0	15.0
>1000	15.0	7.0	6.0	2.5	1.4	20.0

Notes

I_{SC} = *maximum short-circuit current at the Point of Common Coupling (PCC)*

I_L = *maximum demand load current (fundamental frequency component) at the PCC.*

Current distortions that result in a dc offset, e.g., half-wave converters, are not permitted.

* All power generation equipment is limited to these values of current distortion, regardless of actual I_{SC} / I_L

Aurora's assessment of harmonic control compliance will be based on Total Demand Distortion (TDD) limits at full load, not the individual harmonic components. If percent TDD is not satisfied for the given short circuit ratio, then the overall harmonics components must be reduced to a reasonable level in order to meet the TDD limits given above

The following table specifies the maximum voltage distortion as a percentage of the nominal fundamental frequency voltage

Voltage at PCC	Individual Voltage Distortion (%)	Total Voltage Distortion THD_V (%)
Vrms ≤ 66kV	3.0	5.0

APPROVALS

Recommended		M. O'Neill	Infrastructure Performance Manager (Delta)	5 June 2012
Approved		A. Fletcher	General Manager - Asset Management (Delta)	5 June 2012