

# Constrained-Down Generation

Constrained-down generation (CDG) primarily occurs when the amount of power a generator is dispatched to supply to the system is limited by insufficient transmission capacity. During a CDG event, the AESO System Controller enacts mitigation steps in the sequence specified by [ISO Rule Section 302.1: Real Time Transmission Constraint Management](#). Tables 1 and 2 below provide historical information on CDG volumes and the duration of CDG events. The data are categorized into TCM Areas consistent with the definitions given by the Information Documents associated with ISO Rule Section 302.1.

Consistent with the previously reported CDG in the AESO's [24-Month Reliability Outlook \(2014-2015\)](#), the AESO is presenting below estimated volumes of CDG. All calculations are performed consistent with Method 3 (i.e. Ex Post based on Estimated CDG) described in the [AESO Annual Report on AUC Decision 2013-135 Direction No. 3](#).

Table 1 provides the estimated GWh amount of generation constrained annually from 2011 to 2014 in continuation of the previous update. The AESO notes that the Keephills-Ellerslie-Genesee (KEG) and Northeast areas account for most of the estimated CDG in the period.

Table 2 provides the total duration of constraints on an annual basis. AESO notes that the KEG, Northeast and South regions have the highest number of constraint hours.

**Table 1: Annual Total Estimated Constrained-Down Generation (GWh)**

GWh									
Year	Central East	Cold Lake	Crossfield	KEG	North – South	Northeast	Northwest	South	All
2011	4	0	1	81	5	14	0	3	108
2012	7	0	0	54	0	21	0	1	84
2013	19	0	2	43	1	33	3	2	103
2014	1	0	0	131	1	13	0	3	149

**Table 2: Number of Hours with Constrained-Down Generation**

Total Hours									
Year	Central East	Cold Lake	Crossfield	KEG	North – South	Northeast	Northwest	South	All
2011	84	0	29	304	44	384	0	861	1465
2012	71	0	10	196	5	335	12	294	932
2013	246	7	193	126	10	503	311	388	1596
2014	8	19	0	322	5	227	29	150	760