

October 27, 2014

To: AESO Loss Factor Stakeholder Group

Re: Draft Loss Factors for 2015

The AESO has completed its preliminary calculation of the 2015 loss factors (see Appendix A for results). The analysis includes the application of the 2014 Generic Stacking Order (GSO) published on October 9, 2014. The loss factor base cases used to determine the draft loss factors are published on October 27, 2014 as well.

The AESO will be posting the final 2015 loss factors on or before November 7, 2014 and will include an explanation for the changes in loss factors by area.

In order to provide perspective on the draft values, the AESO offers the following:

Load treatment:

- As in previous years, in the 2015 loss factor calculation, only transmission loads are unassigned¹, all non-transmission loads, i.e., “behind-the-fence” loads, are assigned to generators within their facility of operation. The loss factors are based on generation less the non transmission load while maintaining the appropriate GSO dispatch at the MPID bus.
- The load used in the base cases is consistent with the AESO's latest long term load forecast (2014 LTO update).

Inter-Tie Losses

- Import loss factors in 2015 reflect the implementation of the 2007 Transmission Regulation.

¹ Please see Section 2.2 of [Loss Factor Calculation Methodology - Effective January 01, 2009](#)

- The settlement tie line losses are shown in Table 1. Please note the numbers may not add due to rounding.

Table 1 – Tie Line Losses

Tie	Transaction Type	Loss Factor (%)	Average Loss Charge (%)	Settlement LF (%)
BC	Import	1.71	0.80	2.51
	Export	-	0.77	0.77
SK	Import	3.84	2.50	6.34
	Export	-	2.30	2.30

Shift Factor:

- The preliminary shift factor for 2015 draft loss factors has been determined at 0.88%. The 2014 shift factor for loss factors was 0.38%, representing a difference of 0.50%.

Weighting Factor:

- The AESO has applied unequal weighting factor to the raw loss factors based on forecasted load levels. Table 2 shows the seasonal weighting factors.

Table 2 – Seasonal Weighting Factors

	Winter		Spring		Summer		Fall	
	Duration (hr)	Weight (%)	Duration (hr)	Weight (%)	Duration (hr)	Weight (%)	Duration (hr)	Weight (%)
High	50	2.3%	75	3.4%	125	5.7%	125	5.7%
Medium	1950	90.3%	1750	79.3%	1850	83.8%	1475	67.5%
Low	160	7.4%	382	17.3%	233	10.6%	585	26.8%

For the most part, the 2015 loss factors reflect changes in the AIES as would be expected through normal generation, load and transmission changes and large generator maintenance schedules. A more detailed explanation of the loss factors by area will be provided with the final loss factor document.

Please provide any comments on the draft 2015 loss factors in writing to lossfactor@aeso.ca by November 3, 2014.

Yours truly,

Original signed by

John Kehler,
Senior Technical Advisor

cc: Han Yu
Jane Wu

Appendix A: 2015 Draft Loss Factors

MP-ID*	Facility Name	PSS/E Bus	Normalized and Compressed Loss Factor (%)	Loss Factor Asset	Difference % in Loss Factor to System Average
0000001511	FT MACLEOD	4237	1.24	Gen	-2.43
0000006711	STIRLING	4280	2.81	Gen	-0.85
0000022911	GLENWOOD	4245	1.25	Gen	-2.41
0000025611	HARMATTAN GAS PLANT DG	4124	1.62	Gen	-2.05
0000034911	ALTAGAS PARKLAND	4235	0.94	Gen	-2.73
0000038511	SPRING COULEE	4246	2.55	Gen	-1.11
0000039611	PINCHER CREEK	4224	3.05	Gen	-0.62
0000045411	BUCK LAKE	4080	2.50	Gen	-1.17
0000065911	FORTIS GENALTA CARSON CREEK GENERATOR	4325	1.53	Gen	-2.14
AFG1TX	FORTISALBERTA AL-PAC PULP MILL	2392	0.14	Gen	-3.52
AKE1	MCBRIDE	901	3.19	Gen	-0.47
ANC1	FORTIS ANC (ALBERTA NEWSPRINT COMPANY) - GENERATION	298	2.81	Gen	-0.85
ARD1	TRANSALTA ARDENVILLE WIND FARM	739	4.05	Gen	0.38
BAR	BARRIER	216	2.59	Gen	-1.08
BCR2	BEAR CREEK G2	10142	-3.84	Gen	-7.51
BCRK	BEAR CREEK G1	10142	-3.84	Gen	-7.51
BIG	BIGHORN	103	4.30	Gen	0.63
BPW	BEARSPAW	183	0.73	Gen	-2.94
BR3	BATTLE RIVER #3	1491	4.97	Gen	1.30
BR4	BATTLE RIVER #4	1491	4.97	Gen	1.30
BR5	BATTLE RIVER #5	1469	4.67	Gen	1.00
BRA	BRAZEAU	56153	2.64	Gen	-1.02
BSR1	BLACKSPRING RIDGE I WIND PROJECT	736	3.56	Gen	-0.11
BTR1	BLUE TRAIL WIND FARM	328	3.78	Gen	0.11
CAS	CASCADE	175	-0.41	Gen	-4.07
CES1	ENMAX CALGARY ENERGY CENTRE CTG	187	1.34	Gen	-2.33
CES2	ENMAX CALGARY ENERGY CENTRE STG	187	1.34	Gen	-2.33
CHIN	CHIN CHUTE	406	3.41	Gen	-0.26
CMH1	CITY OF MEDICINE HAT	680	1.98	Gen	-1.69
CNR5	CNRL HORIZON	1263	2.22	Gen	-1.44
CR1	CASTLE RIVER	234	3.01	Gen	-0.65
CRE1	COWLEY EXPANSION 1	264	4.07	Gen	0.40
CRE2	COWLEY EXPANSION 2	264	4.07	Gen	0.40
CRE3	COWLEY NORTH	264	4.07	Gen	0.40
CRR1	ENEL ALBERTA CASTLE ROCK WIND FARM	221	3.19	Gen	-0.47
CRS1	ENMAX CROSSFIELD ENERGY CENTER	503	1.53	Gen	-2.14
CRS2	ENMAX CROSSFIELD ENERGY CENTER	503	1.53	Gen	-2.14
CRS3	ENMAX CROSSFIELD ENERGY CENTER	503	1.53	Gen	-2.14
CRWD	COWLEY RIDGE WIND POWER PHASE2	264	4.07	Gen	0.40
DAI1	DIASHOWA	1088	-1.74	Gen	-5.40
DOWGEN15M	DOW GTG	61	2.39	Gen	-1.28
DRW1	DRYWOOD 1	4226	1.53	Gen	-2.14
EAGL	WHITE COURT	410	0.00	Gen	-3.67
EC01	CAVAILIER	247	2.37	Gen	-1.29
EC04	FOSTER CREEK G1	1301	1.95	Gen	-1.72

MP-ID*	Facility Name	PSS/E Bus	Normalized and Compressed Loss Factor (%)	Loss Factor Asset	Difference % in Loss Factor to System Average
EGC1	ENMAX Shepard Energy Centre	772	1.52	Gen	-2.15
ENC1	CLOVER BAR 1	516	3.01	Gen	-0.65
ENC2	CLOVER BAR 2	516	3.01	Gen	-0.65
ENC3	CLOVER BAR 3	516	3.01	Gen	-0.65
FNG1	FORT NELSON	20000	-1.98	Gen	-5.65
GHO	GHOST	180	1.00	Gen	-2.67
GN1	GENESEE 1	525	4.62	Gen	0.96
GN2	GENESEE 2	525	4.62	Gen	0.96
GN3	GENESEE 3	525	4.62	Gen	0.96
GPEC	GRANDE PRAIRIE ECOPOWER CENTRE	1101	-4.17	Gen	-7.84
GWW1	SODERGLEN	358	3.72	Gen	0.05
HAL1	CAPITAL POWER HALKIRK WIND PROJECT	1435	4.66	Gen	0.99
HRM	HR MILNER	1147	-1.56	Gen	-5.22
HSH	HORSESHOE	171	0.91	Gen	-2.75
IEW1	SUMMERVIEW 1	336	3.41	Gen	-0.26
IEW2	SUMMERVIEW 2	336	3.41	Gen	-0.26
INT	INTERLAKES	376	2.23	Gen	-1.44
IOR1	MAHKESES COLD LAKE	56789	1.02	Gen	-2.65
KAN	KANANASKIS	193	0.68	Gen	-2.99
KH1	KEEPHILLS #1	420	4.75	Gen	1.08
KH2	KEEPHILLS #2	420	4.75	Gen	1.08
KH3	KEEPHILLS #3	610	4.60	Gen	0.94
KHW1	KETTLES HILL WIND ENERGY PHASE 2	402	3.23	Gen	-0.44
MATLIMP	MONTANA TIE LINE	451	2.46	Gen	-1.21
MEG1	MEG ENERGY	405	1.64	Gen	-2.03
MKR1	MUSKEG	1236	3.04	Gen	-0.63
MKRC	MCKAY RIVER	1274	3.19	Gen	-0.48
NEP1	GHOST PINE WIND FARM	603	3.90	Gen	0.23
NOVAGEN15M	NOVA JOFFRE	383	1.68	Gen	-1.99
NPC1	NORTHSTONE ELMWORTH	19134	-6.42	Gen	-10.09
NPP1	NORTHERN PRAIRIE POWER PROJECT	1120	-6.61	Gen	-10.28
NRG3	NRGREEN WINDFALL POWER GENERATING STATION	1674	2.03	Gen	-1.63
NX01	BALZAC	290	1.48	Gen	-2.19
NX02	NEXEN OPTI	1241	2.05	Gen	-1.61
OMRH	OLDMAN	230	3.26	Gen	-0.41
PH1	POPLAR HILL	1118	-6.75	Gen	-10.42
PKNE	COWLEY RIDGE WIND POWER PHASE1	264	4.07	Gen	0.40
POC	POCATERRA	214	1.51	Gen	-2.16
PR1	PRIMROSE	1302	1.44	Gen	-2.22
Project1245_1_GN	Cenovus Sunday Creek BTF	23752	0.51	Gen	-3.15
Project1472_1_GN	Fortis Genalta Bellshill DG	4078	4.14	Gen	0.47
Project1523_1_GN	ATCO Genalta Cadotte Generator Increase	19083	-1.13	Gen	-4.80
RB1	RAINBOW 1	1031	-2.73	Gen	-6.39
RB2	RAINBOW 2	1032	-2.73	Gen	-6.39
RB3	RAINBOW 3	1033	-2.48	Gen	-6.14
RB5	RAINBOW 5	1037	-2.52	Gen	-6.18
RL1	RAINBOW 4	1035	-2.14	Gen	-5.80

MP-ID*	Facility Name	PSS/E Bus	Normalized and Compressed Loss Factor (%)	Loss Factor Asset	Difference % in Loss Factor to System Average
RUN	RUNDLE	195	1.37	Gen	-2.30
RYMD	RAYMOND RESERVOIR	413	5.04	Gen	1.38
SCL1	SYNCRUDE	1205	3.51	Gen	-0.16
SCR1	SUNCOR MILLENIUM	1208	3.47	Gen	-0.19
SCR2	SUNCOR MAGRATH	251	2.92	Gen	-0.75
SCR3	SUNCOR HILLRIDGE WIND FARM	389	1.93	Gen	-1.74
SCR4	SUNCOR WINTERING HILLS WIND ENERGY PROJECT	759	5.09	Gen	1.42
SCTG	SHELL SCOTFORD	43	2.33	Gen	-1.33
SD1	SUNDANCE #1	135	5.07	Gen	1.40
SD2	SUNDANCE #2	135	5.07	Gen	1.40
SD3	SUNDANCE #3	135	5.07	Gen	1.40
SD4	SUNDANCE #4	135	5.07	Gen	1.40
SD5	SUNDANCE #5	135	5.07	Gen	1.40
SD6	SUNDANCE #6	135	5.07	Gen	1.40
SH1	SHEERNESS #1	1484	4.48	Gen	0.81
SH2	SHEERNESS #2	1484	4.48	Gen	0.81
SHCG	SHELL CAROLINE	370	-0.13	Gen	-3.79
SPR	SPRAY	310	1.20	Gen	-2.47
ST1	STURGEON 1	1166	-0.46	Gen	-4.13
ST2	STURGEON 2	1166	-0.46	Gen	-4.13
TAB1	TABER WIND	343	0.70	Gen	-2.96
TAY1	TAYLOR HYDRO	670	3.98	Gen	0.32
TC01	CARSELAND	5251	1.71	Gen	-1.95
TC02	Fortis ANC (Alberta Newsprint Company) - Generation	50	1.99	Gen	-1.68
THS	FORTIS GENALTA CARSON CREEK GENERATOR - STS INCREASE	379	1.05	Gen	-2.61
VVW1	ALBERTA WIND ENERGY OLD MAN RIVER WIND FARM	1172	-0.42	Gen	-4.08
VVW2	ENMAX SHEPARD ENERGY CENTRE	1172	-0.42	Gen	-4.08
WEY1	BLACKSPRING RIDGE I WIND PROJECT	1140	-3.93	Gen	-7.60
WST1	IMPERIAL OIL COLD LAKE EXPANSION NABIYE PLANT	14	0.00	Gen	-3.67
321S033	DAISHOWA-MARUBENI INTERNATIONAL LTD	1087	2.53	DOS	-1.13

NOTES:

* MP-ID - point where loss factors assessed
For loss factors, "-" means credit, "+" means charge
System Average Losses, %: **3.67**
For more information, please visit www.aeso.ca