

October 21, 2011

To: AESO Loss Factor Stakeholder Group

Re: Draft Loss Factors for 2012

The AESO has completed its preliminary calculation of the 2012 loss factors (see Appendix A for results). The analysis includes the application of the 2012 Generic Stacking Order (GSO) published September 16th 2011 to the 2012 Loss Factor base cases. The loss factor base cases used to determine the preliminary loss factors given in this document have had slight topological updates in relation to the base cases published on October 14, 2011. These updates are outlined under *Topological Updates* below.

The AESO will be posting the final 2012 loss factors on or before November 04, 2011 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:

Topological Updates:

The cases used to determine the draft loss factors differ from the posted cases in the following aspects.

- The transformers that connected the now terminated Sundance 1 and 2 units to the system have been removed from the base cases for all seasons.
- The model reflecting Fort Nelson (FNG1) and surrounding area has been modified to better represent its actual operation.

Load treatment:

- As in previous years, in the 2012 loss factor calculation, only transmission loads are unassigned¹, all non transmission loads ie “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 Future Demand and Energy Outlook (2009 - 2029) "FC2009", updated for AESO's AIES and DTS FC2009 Update (July 20, 2011).

Inter-Tie Losses

- Import loss factors in 2012 reflect the implementation of the 2007 Transmission Regulation.
- The settlement tie line losses are shown in Table 1

Table 1 – Tie Line Losses

Tie	Transaction Type	Loss Factor (%)	Average Loss Charge (%)	Settlement LF (%)
BC	Import	1.47	0.94	2.40
	Export	-	0.96	0.96
SK	Import	3.28	2.50	5.78
	Export	-	2.30	2.30

Shift Factor:

- The preliminary shift factor for 2012 has been determined at 1.12%. The 2011 shift factor for the recalculated loss factors was 1.63%, representing a difference of 0.51%.

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	100	4.6	50	2.3	150	6.8	75	3.4
Medium	1450	66.4	1325	60.0	1150	52.1	1300	59.5
Low	634	29.0	832	37.7	908	41.1	810	37.1

For the most part, the 2012 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.

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

Please provide any comments on the draft 2012 loss factors in writing to lossfactor@aeso.ca by October 28, 2011.

Yours truly,

Original signed by

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cc: Ashikur Bhuiya
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Appendix A: 2012 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
0000034911	ALTAGAS PARKLAND	235	0.71	Gen	-3.52
NX01	BALZAC	290	1.01	Gen	-3.21
BAR	BARRIER	216	-0.27	Gen	-4.50
BR3	BATTLE RIVER #3	1491	6.11	Gen	1.89
BR4	BATTLE RIVER #4	1491	6.11	Gen	1.89
BR5	BATTLE RIVER #5	1469	5.24	Gen	1.02
BCRK	BEAR CREEK G1	10142	-3.62	Gen	-7.84
BCR2	BEAR CREEK G2	10142	-3.62	Gen	-7.84
BPW	BEARSPAW	184	0.20	Gen	-4.03
BIG	BIGHORN	103	2.00	Gen	-2.22
BTR1	BLUE TRAIL WIND FARM	328	2.81	Gen	-1.42
BRA	BRAZEAU	56153	2.43	Gen	-1.79
GOC1	BRIDGE CREEK	1145	0.00	Gen	-4.22
0000045411	BUCK LAKE	80	3.34	Gen	-0.88
TC01	CARSELAND	5251	1.14	Gen	-3.09
CAS	CASCADE	175	-0.79	Gen	-5.01
CR1	CASTLE RIVER	234	2.40	Gen	-1.83
EC01	CAVALIER	247	1.45	Gen	-2.77
CHIN	CHIN CHUTE	406	0.00	Gen	-4.22
CMH1	CITY OF MEDICINE HAT	680	1.58	Gen	-2.64
ENC1	CLOVER BAR 1	516	3.97	Gen	-0.26
ENC2	CLOVER BAR 2	516	3.97	Gen	-0.26
ENC3	CLOVER BAR 3	516	3.97	Gen	-0.26
CNR5	CNRL HORIZON	1263	2.59	Gen	-1.63
CRE1	COWLEY EXPANSION 1	264	4.20	Gen	-0.03
CRE2	COWLEY EXPANSION 2	264	4.20	Gen	-0.03
CRE3	COWLEY NORTH	264	4.20	Gen	-0.03
PKNE	COWLEY RIDGE WIND POWER PHASE1	264	4.20	Gen	-0.03
CRWD	COWLEY RIDGE WIND POWER PHASE2	264	4.20	Gen	-0.03
DAI1	DIASHOWA	1088	-1.94	Gen	-6.17
DKSN	DICKSON DAM 1	4006	5.07	Gen	0.85
DOWGEN15M	DOW GTG	61	3.50	Gen	-0.73
DV1	DRAYTON VALLEY PL IPP	4332	0.00	Gen	-4.22
DRW1	DRYWOOD 1	4226	2.45	Gen	-1.78
CES1	ENMAX CALGARY ENERGY CENTRE CTG	187	1.08	Gen	-3.15
CES2	ENMAX CALGARY ENERGY CENTRE STG	187	1.08	Gen	-3.15
CRS1	ENMAX CROSSFIELD ENERGY CENTER	503	1.18	Gen	-3.04
CRS2	ENMAX CROSSFIELD ENERGY CENTER	503	1.18	Gen	-3.04
CRS3	ENMAX CROSSFIELD ENERGY CENTER	503	1.18	Gen	-3.04
FNG1	FORT NELSON	20000	3.58	Gen	-0.65
AFG1TX	FORTISALBERTA AL-PAC PULP MILL	392	0.77	Gen	-3.45
EC04	FOSTER CREEK G1	1301	3.25	Gen	-0.97
0000001511	FT MACLEOD	4237	1.41	Gen	-2.81
GN1	GENESEE 1	525	5.68	Gen	1.45
GN2	GENESEE 2	525	5.68	Gen	1.45
GN3	GENESEE 3	525	5.68	Gen	1.45
GHO	GHOST	180	-0.31	Gen	-4.54
NEP1	GHOST PINE WIND FARM	603	3.91	Gen	-0.31
0000022911	GLENWOOD	245	2.18	Gen	-2.04
GPEC	GRANDE PRAIRIE ECOPOWER CENTRE	1101	-3.91	Gen	-8.13
0000025611	HARMATTAN GAS PLANT DG	4123	-0.45	Gen	-4.67
HSR	HORSESHOE	171	-0.27	Gen	-4.49
HRM	HR MILNER	1147	-0.97	Gen	-5.19
INT	INTERLAKES	376	0.99	Gen	-3.23
KAN	KANANASKIS	193	-0.22	Gen	-4.44
KH1	KEEPHILLS #1	420	6.17	Gen	1.95
KH2	KEEPHILLS #2	420	6.17	Gen	1.95
KH3	KEEPHILLS #3	610	5.60	Gen	1.38
KHW1	KETTLES HILL WIND ENERGY PHASE 2	402	2.59	Gen	-1.64
IOR1	MAHKESES COLD LAKE	56789	4.36	Gen	0.14
AKE1	MCBRIDE	901	2.18	Gen	-2.04
MKRC	MCKAY RIVER	1274	2.36	Gen	-1.86
MEG1	MEG ENERGY	405	3.10	Gen	-1.12
MKR1	MUSKEG	1236	2.31	Gen	-1.91
NX02	NEXEN OPTI	1241	3.26	Gen	-0.96
NPP1	NORTHERN PRAIRIE POWER PROJECT	1120	-6.19	Gen	-10.42
NPC1	NORTHSTONE ELMWORTH	1134	-6.09	Gen	-10.32
NOVAGEN15M	NOVA JOFFRE	383	1.94	Gen	-2.28
OMRH	OLDMAN	230	2.89	Gen	-1.34
WEY1	P&G WEYERHAUSER	1146	-3.10	Gen	-7.32
0000039611	PINCHER CREEK	224	2.37	Gen	-1.85
POC	POCATERRA	214	0.57	Gen	-3.65
PH1	POPLAR HILL	1118	-5.97	Gen	-10.19
PR1	PRIMROSE	1302	2.02	Gen	-2.2

MP-ID*	Facility Name	PSS/E Bus	Normalized and Compressed Loss Factor (%)	Loss Factor Asset	Difference % in Loss Factor to System Average
RB1	RAINBOW 1	1031	2.06	Gen	-2.16
RB2	RAINBOW 2	1032	2.24	Gen	-1.99
RB3	RAINBOW 3	1028	2.31	Gen	-1.91
RL1	RAINBOW 4	83	2.34	Gen	-1.89
RB5	RAINBOW 5	1037	2.17	Gen	-2.05
RYMD	RAYMOND RESERVOIR	413	0.00	Gen	-4.22
TC02	REDWATER	50	3.22	Gen	-1.00
RUN	RUNDLE	195	-0.48	Gen	-4.70
SH1	SHEERNESS #1	1484	5.30	Gen	1.08
SH2	SHEERNESS #2	1484	5.30	Gen	1.08
SHCG	SHELL CAROLINE	4370	-0.09	Gen	-4.32
SCTG	SHELL SCOTFORD	43	3.02	Gen	-1.21
GWW1	SODERGLEN	358	3.08	Gen	-1.15
SPR	SPRAY	310	-0.41	Gen	-4.63
0000038511	SPRING COULEE	246	1.59	Gen	-2.63
STMY	ST MARY IPP	3448	1.61	Gen	-2.62
0000006711	STIRLING	3450	0.11	Gen	-4.12
ST1	STURGEON 1	1166	-1.33	Gen	-5.56
ST2	STURGEON 2	1166	-1.33	Gen	-5.56
IEW1	SUMMERVIEW 1	336	3.00	Gen	-1.22
IEW2	SUMMERVIEW 2	336	3.00	Gen	-1.22
SCR3	SUNCOR HILLRIDGE WIND FARM	389	1.44	Gen	-2.79
SCR2	SUNCOR MAGRATH	251	2.09	Gen	-2.13
SCR1	SUNCOR MILLENIUM	1208	2.21	Gen	-2.02
SCR4	SUNCOR WINTERING HILLS WIND ENERGY PROJECT	759	5.01	Gen	0.79
SD3	SUNDANCE #3	135	4.54	Gen	0.32
SD4	SUNDANCE #4	135	4.54	Gen	0.32
SD5	SUNDANCE #5	135	4.54	Gen	0.32
SD6	SUNDANCE #6	135	4.54	Gen	0.32
SCL1	SYNCRUDE	1205	2.23	Gen	-1.99
TAB1	TABER WIND	343	1.04	Gen	-3.18
TAY1	TAYLOR HYDRO	670	1.91	Gen	-2.31
TAY2	TAYLOR WIND PLANT	670	1.91	Gen	-2.31
THS	THREE SISTERS	379	-0.41	Gen	-4.63
ARD1	TRANSALTA ARDENVILLE WIND FARM	739	3.20	Gen	-1.02
VVW2	VALLEYVIEW 2	1172	-1.05	Gen	-5.28
VVW1	VALLEYVIEW 1	1172	-1.05	Gen	-5.28
WTRN	WATER IPP	3449	1.91	Gen	-2.31
0000040511	WAUPISOO	417	0.86	Gen	-3.37
WST1	WESGEN	21	0.00	Gen	-4.22
EAGL	WHITE COURT	410	0.00	Gen	-4.22
Project519_1_GEN	ALBERTA WIND ENERGY OLD MAN RIVER WIND FARM	543	2.70	Gen	-1.52
Project723_1_SUP	CAPITAL POWER HALKIRK WIND PROJECT	1435	5.85	Gen	1.63
0000016301	Amoco Empress (163S)	262	-0.62	DOS	-4.84
0000079301	ANG Cochrane (793S)	191	3.29	DOS	-0.93
341S025	Syncrude Standby (848S)	1200	-0.01	DOS	-4.23

Notes:

* MP-ID - point where loss factors assessed

For loss factors, "-" means credit, "+" means charge

Loss factors effective from January 01, 2012 to December 31 2012.

System Average Losses, %: **4.22**

For more information, please visit www.aeso.ca