2014
Loss Factors

NOVEMBER 1, 2013

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1 Purpose

The purpose of this document is to present the 2014 final loss factors along with a brief explanation of the results or changes compared to 2013 Recalculated Loss Factors. A loss factor map is included (Appendix III). The loss factors published in this document will be effective from January 01, 2014 to December 31, 2014.

2 Introduction

The AESO has completed the 2014 loss factor process. The 2014 loss factors are shown in Table 1, and settlement loss factors of the tie lines are shown in Table 2. Please note values in Table 2 may not add due to rounding. The process includes the application of the 2014 Generic Stacking Order (GSO) published earlier in the fall and the 2014 Base Cases published on the AESO web site in conjunction with this document. Both the GSO and the Base Cases have been updated and posted based on stakeholder input or more current information during the course of the final calculations.

The loss factor calculation uses four key inputs:

1) 2014 Generic Stacking Order (GSO)
2) New project data
3) Loss factor base cases based on 2014 GSO, load and topology forecast
4) Annual energy and loss volume forecast

The Rule governing the determination of the loss factors is located at www.aeso.ca > Rules & Standards > ISO Rules > Current ISO Rules.

Table 1 – 2014 Final 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	4235	**0.66**	Gen	-2.73
NX01	BALZAC	290	**0.38**	Gen	-3.01
BAR	BARRIER	216	**0.16**	Gen	-3.23
BR3	BATTLE RIVER #3	1491	**6.44**	Gen	3.05
BR4	BATTLE RIVER #4	1491	**6.44**	Gen	3.05
BR5	BATTLE RIVER #5	1469	**5.60**	Gen	2.21
BCRK	BEAR CREEK G1	10142	**-5.65**	Gen	-9.04
BCR2	BEAR CREEK G2	10142	**-5.65**	Gen	-9.04
BPW	BEARSPAW	184	**-0.18**	Gen	-3.57
BIG	BIGHORN	103	**4.70**	Gen	1.31
BTR1	BLUE TRAIL WIND FARM	328	**3.99**	Gen	0.60
BRA	BRAZEAU	56153	**2.06**	Gen	-1.33
GOC1	GOLD CREEK	19145	**0.00**	Gen	-3.39
0000045411	BUCK LAKE	4080	**2.10**	Gen	-1.29
TC01	CARSELAND	5251	**-0.03**	Gen	-3.42
CAS	CASCADE	175	**-0.46**	Gen	-3.85
CR1	CASTLE RIVER	234	**3.06**	Gen	-0.33
CRR1	ENEL ALBERTA CASTLE ROCK WIND FARM	221	**3.18**	Gen	-0.21
EC01	CAVAILIER	247	**1.54**	Gen	-1.85
CHIN	CHIN CHUTE	406	**2.50**	Gen	-0.89
CMH1	CITY OF MEDICINE HAT	680	**1.14**	Gen	-2.25
ENC1	CLOVER BAR 1	516	**2.91**	Gen	-0.48
ENC2	CLOVER BAR 2	516	**2.91**	Gen	-0.48
ENC3	CLOVER BAR 3	516	**2.91**	Gen	-0.48
CNR5	CNRL HORIZON	1263	**2.97**	Gen	-0.42
CRE1	COWLEY EXPANSION 1	264	**4.47**	Gen	1.08
CRE2	COWLEY EXPANSION 2	264	**4.47**	Gen	1.08
CRE3	COWLEY NORTH	264	**4.47**	Gen	1.08
PKNE	COWLEY RIDGE WIND POWER PHASE1	264	**4.47**	Gen	1.08
CRWD	COWLEY RIDGE WIND POWER PHASE2	264	**4.47**	Gen	1.08
DAI1	DIASHOWA	1088	**-3.61**	Gen	-7.01
DOWGEN15M	DOW GTG	61	**3.14**	Gen	-0.25
DRW1	DRYWOOD 1	4226	**3.02**	Gen	-0.37
CES1	ENMAX CALGARY ENERGY CENTRE CTG	187	**0.51**	Gen	-2.88
CES2	ENMAX CALGARY ENERGY CENTRE STG	187	**0.51**	Gen	-2.88
CRS1	ENMAX CROSSFIELD ENERGY CENTER	503	**0.93**	Gen	-2.46
CRS2	ENMAX CROSSFIELD ENERGY CENTER	503	**0.93**	Gen	-2.46
CRS3	ENMAX CROSSFIELD ENERGY CENTER	503	**0.93**	Gen	-2.46
FNG1	FORT NELSON	20000	**-4.32**	Gen	-7.71
AFG1TX	FORTISALBERTA AL-PAC PULP MILL	392	**0.56**	Gen	-2.83
EC04	FOSTER CREEK G1	1301	**2.67**	Gen	-0.72
0000001511	FT MACLEOD	4237	**2.16**	Gen	-1.23
GN1	GENESEE 1	525	**4.39**	Gen	1.00
GN2	GENESEE 2	525	**4.39**	Gen	1.00
GN3	GENESEE 3	525	**4.39**	Gen	1.00
GHO	GHOST	180	**0.26**	Gen	-3.13
NEP1	GHOST PINE WIND FARM	603	**4.12**	Gen	0.73
0000022911	GLENWOOD	4245	**2.51**	Gen	-0.88
GPEC	GRANDE PRAIRIE ECOPOWER CENTRE	1101	**-6.01**	Gen	-9.40
HAL1	CAPITAL POWER HALKIRK WIND PROJECT	1435	**5.68**	Gen	2.29
0000025611	HARMATTAN GAS PLANT DG	4123	**0.48**	Gen	-2.91
HSH	HORSESHOE	171	**0.44**	Gen	-2.95
HRM	HR MILNER	1147	**-3.33**	Gen	-6.72
INT	INTERLAKES	376	**2.20**	Gen	-1.19
KAN	KANANASKIS	193	**0.40**	Gen	-2.99

MP-ID*	Facility Name	PSS/E Bus	Normalized and Compressed Loss Factor (%)	Loss Factor Asset	Difference % in Loss Factor to System Average
KH1	KEEPHILLS #1	420	**4.73**	Gen	1.34
KH2	KEEPHILLS #2	420	**4.73**	Gen	1.34
KH3	KEEPHILLS #3	610	**4.33**	Gen	0.94
KHW1	KETTLES HILL WIND ENERGY PHASE 2	402	**3.28**	Gen	-0.11
IOR1	MAHKESES COLD LAKE	56789	**3.41**	Gen	0.02
AKE1	MCBRIDE	901	**3.06**	Gen	-0.33
MKRC	MCKAY RIVER	1274	**3.20**	Gen	-0.19
MEG1	MEG ENERGY	405	**2.76**	Gen	-0.63
MATLIMP	MONTANA TIE LINE	451	**3.18**	Gen	-0.21
MKR1	MUSKEG	1236	**3.02**	Gen	-0.37
NX02	NEXEN OPTI	1241	**2.96**	Gen	-0.43
NPP1	NORTHERN PRAIRIE POWER PROJECT	1120	**-8.72**	Gen	-12.11
NPC1	NORTHSTONE ELMWORTH	1134	**-8.13**	Gen	-11.52
NOVAGEN15M	NOVA JOFFRE	383	**1.05**	Gen	-2.34
OMRH	OLDMAN	230	**3.42**	Gen	0.03
WEY1	P&G WEYERHAUSER	1140	**-5.89**	Gen	-9.28
0000039611	PINCHER CREEK	4224	**3.11**	Gen	-0.28
POC	POCATERRA	214	**1.55**	Gen	-1.84
PH1	POPLAR HILL	1118	**-8.89**	Gen	-12.28
PR1	PRIMROSE	1302	**1.24**	Gen	-2.15
RB1	RAINBOW 1	1031	**-5.00**	Gen	-8.39
RB2	RAINBOW 2	1032	**-3.88**	Gen	-7.27
RB3	RAINBOW 3	1028	**-4.81**	Gen	-8.20
RL1	RAINBOW 4	83	**-4.84**	Gen	-8.23
RB5	RAINBOW 5	1037	**-4.92**	Gen	-8.31
RYMD	RAYMOND RESERVOIR	413	**4.03**	Gen	0.64
TC02	REDWATER	50	**2.96**	Gen	-0.43
RUN	RUNDLE	195	**0.74**	Gen	-2.65
SH1	SHEERNESS #1	1484	**4.69**	Gen	1.30
SH2	SHEERNESS #2	1484	**4.69**	Gen	1.30
SHCG	SHELL CAROLINE	370	**0.72**	Gen	-2.67
SCTG	SHELL SCOTFORD	43	**2.91**	Gen	-0.48
GWW1	SODERGLEN	358	**3.93**	Gen	0.54
SPR	SPRAY	310	**0.72**	Gen	-2.67
0000038511	SPRING COULEE	4246	**2.24**	Gen	-1.15
0000006711	STIRLING	4280	**2.17**	Gen	-1.22
ST1	STURGEON 1	1166	**-2.66**	Gen	-6.05
ST2	STURGEON 2	1166	**-2.66**	Gen	-6.05
IEW1	SUMMERVIEW 1	336	**3.33**	Gen	-0.06
IEW2	SUMMERVIEW 2	336	**3.33**	Gen	-0.06
SCR3	SUNCOR HILLRIDGE WIND FARM	389	**2.13**	Gen	-1.26
SCR2	SUNCOR MAGRATH	251	**3.02**	Gen	-0.37
SCR1	SUNCOR MILLENIUM	1208	**3.54**	Gen	0.15
SCR4	SUNCOR WINTERING HILLS WIND ENERGY PROJECT	759	**5.19**	Gen	1.80
SD1	SUNDANCE #1	135	**3.95**	Gen	0.56
SD2	SUNDANCE #2	135	**3.95**	Gen	0.56
SD3	SUNDANCE #3	135	**3.95**	Gen	0.56
SD4	SUNDANCE #4	135	**3.95**	Gen	0.56
SD5	SUNDANCE #5	135	**3.95**	Gen	0.56
SD6	SUNDANCE #6	135	**3.95**	Gen	0.56
SCL1	SYNCRUDE	1205	**3.33**	Gen	-0.06
TAB1	TABER WIND	343	**1.20**	Gen	-2.19
TAY1	TAYLOR HYDRO	670	**3.43**	Gen	0.04
THS	THREE SISTERS	379	**0.31**	Gen	-3.08
ARD1	TRANSALTA ARDENVILLE WIND FARM	739	**4.31**	Gen	0.92
VVW2	ATCO VALLEY VIEW 2	1172	**-2.31**	Gen	-5.70
VVW1	VALLEYVIEW	1172	**-2.31**	Gen	-5.70

MP-ID*	Facility Name	PSS/E Bus	Normalized and Compressed Loss Factor (%)	Loss Factor Asset	Difference % in Loss Factor to System Average
WST1	WESGEN	21	**0.00**	Gen	-3.39
EAGL	WHITE COURT	410	**0.00**	Gen	-3.39
NRG3	NRGREEN WINDFALL POWER GENERATING STATION	1674	**-0.13**	Gen	-3.52
ANC1	Fortis ANC (Alberta Newsprint Company) - Generation	298	**0.48**	Gen	-2.92
GEN5	FORTIS GENALTA CARSON CREEK GENERATOR - STS INCREASE	4325	**-1.31**	Gen	-4.70
Project519_1_GEN	ALBERTA WIND ENERGY OLD MAN RIVER WIND FARM	543	**3.71**	Gen	0.32
Project719_1_SUP	ENMAX SHEPARD ENERGY CENTRE	772	**0.86**	Gen	-2.53
Project728_1_GEN	BLACKSPRING RIDGE I WIND PROJECT	736	**3.60**	Gen	0.20
Project901_1_GEN	IMPERIAL OIL COLD LAKE EXPANSION NABIYE PLANT	1351	**0.50**	Gen	-2.89
0000016301	Amoco Empress (163S)	262	**-1.71**	DOS	-5.10
0000079301	ANG Cochrane (793S)	191	**1.25**	DOS	-2.14
341S025	Syncrude Standby (848S)	1200	**-2.45**	DOS	-5.85

NOTES:
* MP-ID - point where loss factors assessed
For loss factors, "-" means credit, "+" means charge
Loss factors effective from January 01, 2014 to December 31, 2014.
System Average Losses, %: **3.39**
For more information, please visit www.aeso.ca

Table 2 – 2014 Tie Loss Factors

Tie	Transaction Type	Loss Factor (%)	Average Loss Charge (%)	Settlement LF (%)
BC	Import	1.07	0.98	2.05
	Export	-	0.66	0.66
SK	Import	2.93	2.50	5.43
	Export	-	2.30	2.30

3 2014 Loss Factors Overview

The following items provide an overview of 2014 loss factor process:

1) Load Treatment in the Loss Factor Software – In the 2014 loss factor calculation, only transmission loads are unassigned[1], 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.

2) Generation & Load Levels – The 2014 Generic Stacking Order was used to populate the loss factor base cases for the 2014 loss factor calculation. The 2014 loss factors use actual average generation levels to determine loss factors based on the AESO Rule[2]. Please refer to Appendix-I for a case comparison. The total gross generation level in 2014 is higher than in the 2013 recalculated cases, due primarily to the new generation projects coming in service from late 2013 to 2014. The load for the 2014 cases has been scaled down in one of the twelve cases to meet the total GSO capacity. The seasonal load duration curves are included in Appendix II.

3) Additions of Generation – Several new generation facilities were added in the 2014 loss factor base cases, including Imperial Oil Cold Lake Expansion Nabiye Plant, Blackspring Ridge I Wind Project, ENMAX Shepard Energy Centre, and Alberta Wind Energy Old Man River Wind Farm. These projects were added according to their in-service-date.

4) Small Power Research and Development (SPR&D) Generators – The SPR&D Act exempted a number of generators from paying transmission losses based on a SPR&D contract. These contracts were valid for 20 years and starting in 2011, some of the SPR&D contracts have begun to expire. Raymond Reservoir and Chin Chute are partially included in the 2014 loss factor calculation based on the status of their SPR&D contracts.

5) ISD Equivalents – In the 2014 cases, Industrial System Designations (ISDs) are modeled in the same way as they were modeled in the 2013 cases. The total ISD load and generation are modeled at the ISD's AIES interface bus.

6) Topology – The major 2014 planned transmission project additions include the large staged reinforcement projects including the transmission development in Central, South, Northeast and Edmonton regions. All other 2014 planned system additions have also been modeled in the 2014 cases.

[1] Please see Section 2.2 of Loss Factor Calculation Methodology - Effective January 01, 2009
[2] Please see Section 5 of the Appendix 1 of Section 501.10 Transmission Loss Factor Requirements

7) Average System Losses and Shift Factor – the annual loss forecast for 2014 is 2.31 TWH or 3.39%. Please refer to Table 3 for a comparison of the system average loss and shift factor.

Table 3 – 2014 vs. 2013 Recalculated Final Loss Factors

	2014	2013
System average loss	3.39%	3.83%
Shift Factor	0.39%	0.86%
Loss recovered by Raw Loss Factor	3.00%	2.97%

8) Weighting Factor – In a continuing effort to enhance accuracy, the AESO has applied unequal weighting factors to the raw loss factors based on forecast load levels. Please see Table 4 for 2014 weighting factors used in the loss factor calculation.

Table 4 – 2014 Weighting Factors

	Winter		Spring		Summer		Fall	
	Duration (hr)	Weight	Duration (hr)	Weight	Duration (hr)	Weight	Duration (hr)	Weight
High	50	2.3%	150	6.8%	50	2.3%	150	6.9%
Medium	1700	78.7%	1550	70.2%	2025	91.7%	1300	59.5%
Low	410	19.0%	507	23.0%	133	6.0%	735	33.6%

4 2014 Loss Factor Updates From Draft to Final Base Cases

The only difference between the final and draft base cases is that the bus voltages were further adjusted to more closely reflect anticipated system operating voltages. On this basis the loss factors have undergone some minor changes from the 2014 draft posting to the 2014 final loss factors in Table 1 of this document.

5 2014 Overall Loss Factor Results

There are some changes between the 2014 final loss factors and the Final Alberta Recalculated Loss Factors for 2013 posted on October 31, 2013. Changes in loss factors can be attributed to changes in: dispatched generation, load and transmission topology resulting from new projects. The high level results are summarized below:

1. The Rainbow area has experienced a considerable decrease in loss factor charge. The flow out of the Rainbow area has decreased considerably and it is reflected in the loss factors. The Rainbow area loss factors are historically sensitive to load and generation changes. The loss factor sensitivity in the area is consistent with previous years' findings.

2. The West area has experienced increases in loss factor credits. The transmission load in the area has increased over the 2013 values. As a result, the net flow out of the area has decreased and thus caused an increase in loss factor credits.

3. The Fort McMurray area has seen a substantial decrease in loss factor charge relative to the 2013 recalculated loss factors. The decrease in charge can be attributed to a large increase in transmission load resulting in a reduction in net flow out of the area.

4. The east portion of the Cold Lake area receives lower loss factor charges because its net flow has decreased over the 2013 values.

5. The Southeast area receives higher loss factor charges compared to 2013 mainly because of Montana Tie Line import.

6. The Southwest area receives higher loss factor charges compared to 2013 because of the increased generation in this area.

6 Loss Factor Map

The AESO has provided a loss factor map in Appendix III showing the maximum and minimum loss factors in each area. The tie lines and DOS loss factors are also shown. Each facility with a loss factor is shown in its designated area.

7 Conclusion

The AESO has published the 2014 loss factors as per the AESO's Loss Factor Rule, and has made the calculation and provided results using the best information available. The data process includes gathering data from the billing system, new customer facilities, and system load and topology features. The AESO has completed the loss factor calculation process and has had the results independently run for comparison purposes. The results from the AESO's calculation are identical to the results run independently.

The AESO published the draft values on October 28, 2013 for stakeholders' review. The 2014 loss factors will be applicable from January 01, to December 31, 2014.

Appendix I: Case Comparison - AIL

Winter Peak Case

	Load (MW)			Loss (MW)		BC Import (MW)	BC Export (MW)
	Static	Motor	Total	Shunt	Transmission		
2014	10675.1	170.8	10845.9	25.6	317.8	491.3	-
2013 Recal	10111.4	174.7	10286.1	23.3	307.9	456.0	-
2014-2013	563.7	-3.8	559.8	2.3	9.9		

Winter Medium Case

	Load (MW)			Loss (MW)		BC Import (MW)	BC Export (MW)
	Static	Motor	Total	Shunt	Transmission		
2014	9814.6	166.8	9981.4	25.8	297.0	360.6	-
2013 Recal	9082.7	177.2	9259.9	23.3	261.8	244.6	-
2014-2013	731.9	-10.4	721.5	2.5	35.2		

Winter Low Case

	Load (MW)			Loss (MW)		BC Import (MW)	BC Export (MW)
	Static	Motor	Total	Shunt	Transmission		
2014	8779.3	164.6	8943.9	25.6	263.2	85.0	-
2013 Recal	8119.2	208.6	8327.8	23.5	235.0	-	71.5
2014-2013	660.1	-44.0	616.1	2.1	28.2		

Spring Peak Case

	Load (MW)			Loss (MW)		BC Import (MW)	BC Export (MW)
	Static	Motor	Total	Shunt	Transmission		
2014	9929.1	164.1	10093.2	25.9	266.0	522.8	-
2013 Recal	9452.0	179.1	9631.0	23.6	263.9	453.4	-
2014-2013	477.1	-15.0	462.2	2.3	2.1		

Spring Medium Case

	Load (MW)			Loss (MW)		BC Import (MW)	BC Export (MW)
	Static	Motor	Total	Shunt	Transmission		
2014	9094.7	155.6	9250.3	26.0	245.2	356.1	-
2013 Recal	8667.8	176.5	8844.2	23.7	221.0	424.8	-
2014-2013	426.9	-20.9	406.1	2.3	24.2		

Spring Low Case

	Load (MW)			Loss (MW)		BC Import (MW)	BC Export (MW)
	Static	Motor	Total	Shunt	Transmission		
2014	8083.1	153.2	8236.3	25.9	223.0	259.6	-
2013 Recal	7674.5	180.9	7855.4	23.6	198.1	450.1	-
2014-2013	408.6	-27.7	380.9	2.3	24.9		

Summer Peak Case

	Load (MW)			Loss (MW)		BC Import (MW)	BC Export (MW)
	Static	Motor	Total	Shunt	Transmission		
2014	10087.3	158.6	10245.9	26.1	282.1	467.2	-
2013 Recal	9578.0	196.6	9774.6	23.7	258.8	422.6	-
2014-2013	509.3	-38.0	471.3	2.4	23.3		

Summer Medium Case

	Load (MW)			Loss (MW)		BC Import (MW)	BC Export (MW)
	Static	Motor	Total	Shunt	Transmission		
2014	9012.7	163.0	9175.7	26.2	237.9	428.5	-
2013 Recal	8558.7	193.8	8752.5	23.8	224.1	355.2	-
2014-2013	454.0	-30.8	423.2	2.4	13.8		

Summer Low Case

	Load (MW)			Loss (MW)		BC Import (MW)	BC Export (MW)
	Static	Motor	Total	Shunt	Transmission		
2014	8064.6	154.9	8219.5	26.0	199.9	451.0	-
2013 Recal	7625.7	189.7	7815.4	23.8	194.9	341.8	-
2014-2013	438.9	-34.8	404.1	2.2	5.0		

Fall Peak Case

	Load (MW)			Loss (MW)		BC Import (MW)	BC Export (MW)
	Static	Motor	Total	Shunt	Transmission		
2014	10359.9	165.1	10525.0	26.2	287.7	544.8	-
2013 Recal	10401.1	168.3	10569.4	24.3	303.5	414.9	-
2014-2013	-41.2	-3.2	-44.4	1.9	-15.8		

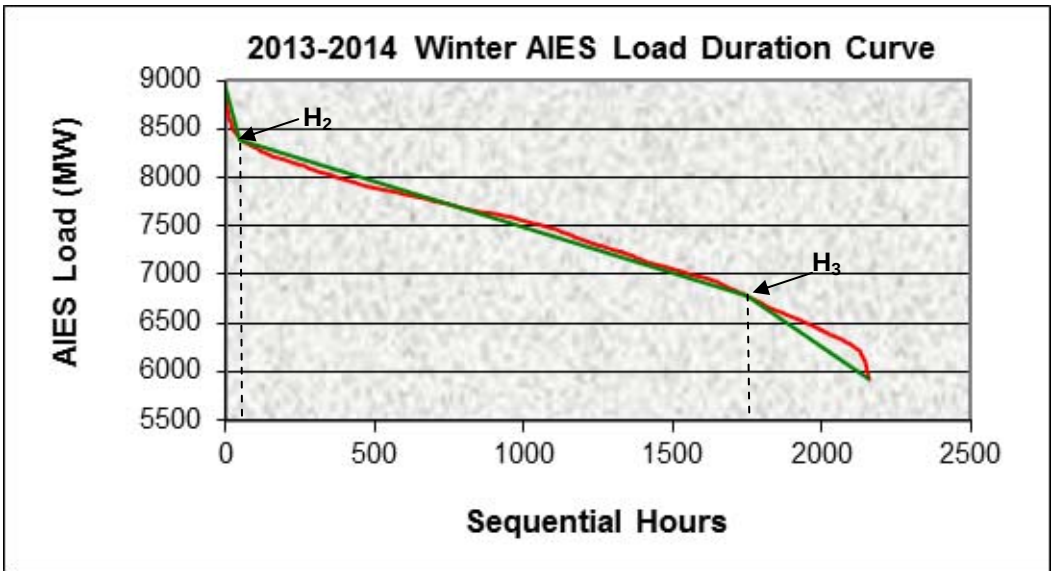
Fall Medium Case

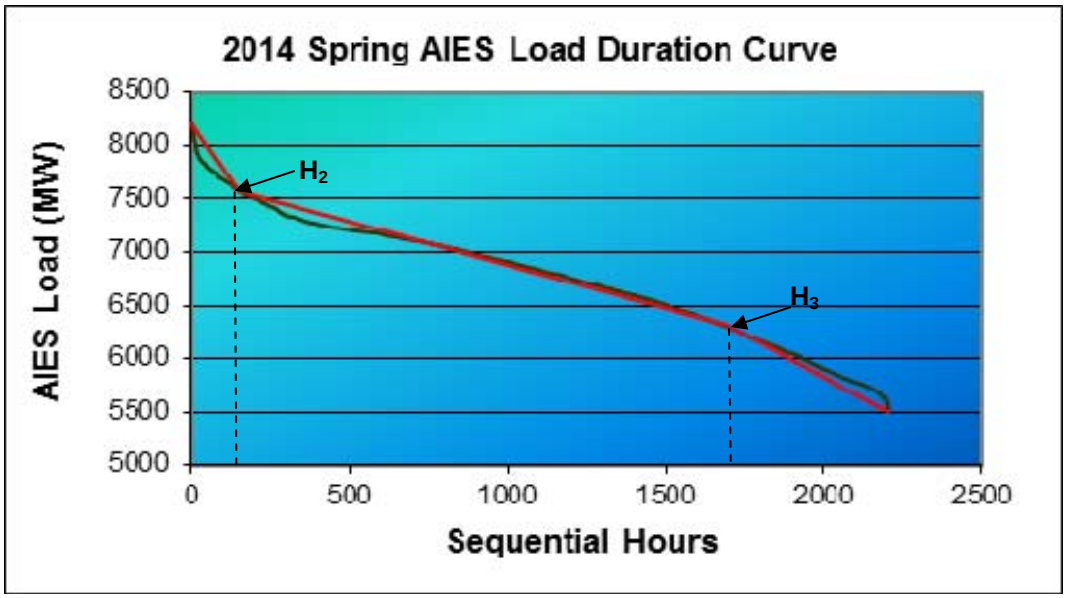
	Load (MW)			Loss (MW)		BC Import (MW)	BC Export (MW)
	Static	Motor	Total	Shunt	Transmission		
2014	9417.1	163.6	9580.7	26.2	260.6	309.7	-
2013 Recal	9263.8	173.1	9436.9	24.6	263.3	363.9	-
2014-2013	153.4	-9.5	143.8	1.6	-2.7		

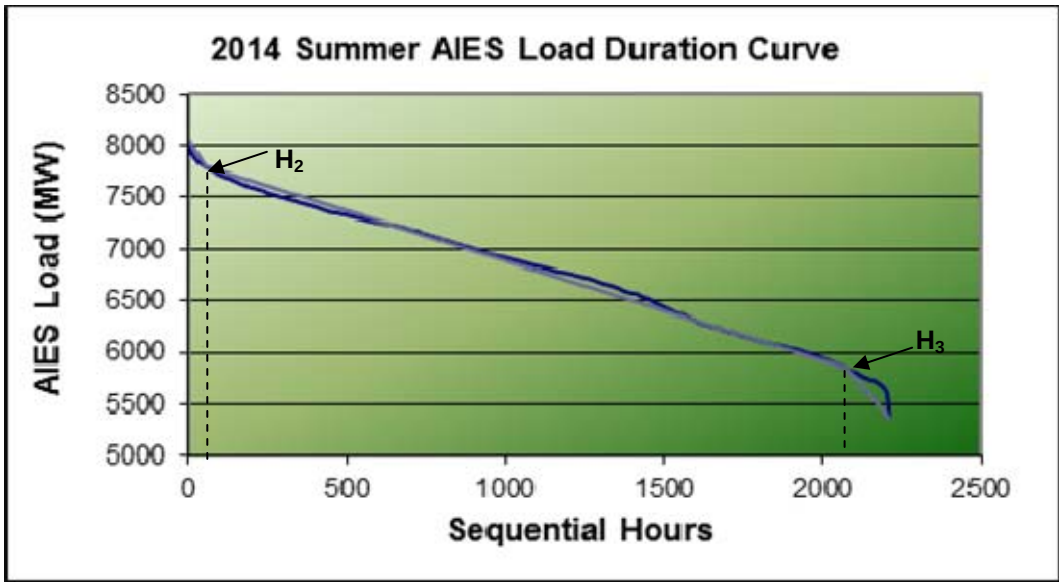
Fall Low Case

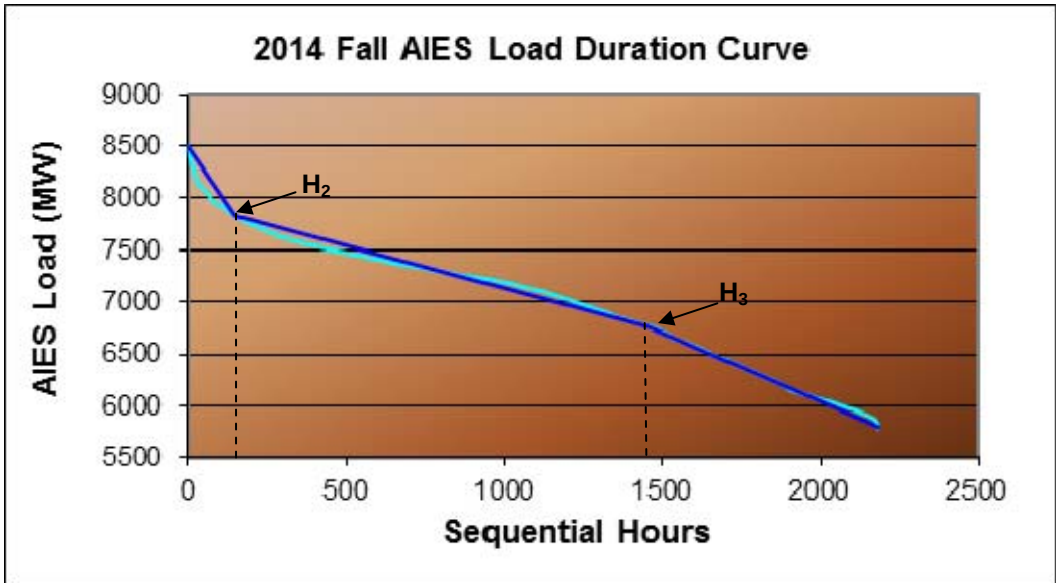
	Load (MW)			Loss (MW)		BC Import (MW)	BC Export (MW)
	Static	Motor	Total	Shunt	Transmission		
2014	8477.6	164.4	8642.0	26.0	221.6	33.4	-
2013 Recal	8258.9	183.8	8442.7	24.6	243.9	106.9	-
2014-2013	218.7	-19.4	199.3	1.4	-22.3		

Appendix II: Load Duration Curves

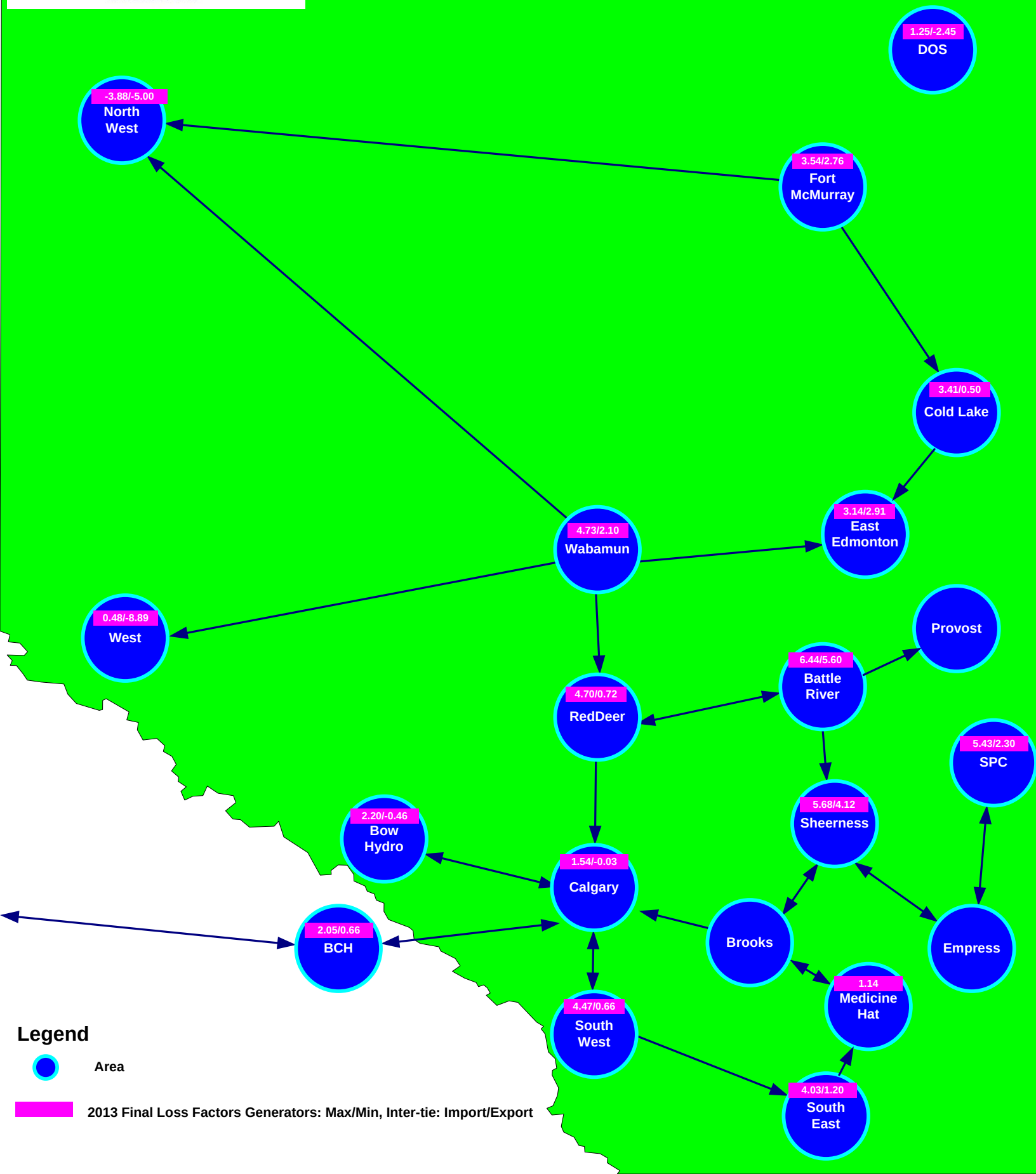





2014 Summer AIES Load Duration Curve
AIES Load (MW)
8500
8000
7500
7000
6500
6000
5500
5000
H2
H3
0
500
1000
1500
2000
2500
Sequential Hours


2014 Fall AIES Load Duration Curve
AIES Load (MW)
9000
8500
8000
7500
7000
6500
6000
5500
H2
H3
0
500
1000
1500
2000
2500
Sequential Hours

Appendix III: 2014 Loss Factor Map



Location	MPID	Loss Factor(%)	Gen Name
North West	RB1	-5.00	RAINBOW 1
	RB2	-3.88	RAINBOW 2
	RB3	-4.81	RAINBOW 3
	RL1	-4.84	RAINBOW 4
	RB5	-4.92	RAINBOW 5
	FNG1	-4.32	FORT NELSON
West	HRM	-3.33	HR MILNER
	PH1	-8.89	POPLAR HILL
	NPC1	-8.13	NORTHSTONE ELMWORTH
	DAI1	-3.61	DIASHOWA
	BCR2	-5.65	BEAR CREEK G2
	BCRK	-5.65	BEAR CREEK G1
	GPEC	-6.01	GRANDE PRAIRIE ECOPOWER CENTRE
	ST1	-2.66	STURGEON 1
	ST2	-2.66	STURGEON 2
	VVW1	-2.31	VALLEYVIEW
	VVW2	-2.31	ATCO VALLEY VIEW 2
	WEY1	-5.89	P&G WEYERHAUSER
	NPP1	-8.72	NORTHERN PRAIRIE POWER PROJECT
	NRG3	-0.13	NRGreen Windfall Power Generating Station
	ANC1	0.48	Fortis ANC (Alberta Newsprint Company) - Generation
	GEN5	-1.31	FORTIS GENALTA CARSON CREEK GENERATOR - STS INCREASE
Fort McMurray	MKR1	3.02	MUSKEG
	MKRC	3.20	MCKAY RIVER
	SCL1	3.33	SYNCRUDE
	SCR1	3.54	SUNCOR MILLENIUM
	NX02	2.96	NEXEN OPTI
	MEG1	2.76	MEG ENERGY
	CNR5	2.97	CNRL HORIZON
Wabamun	GN1	4.39	GENESEE 1
	GN2	4.39	GENESEE 2
	GN3	4.39	GENESEE 3
	KH1	4.73	KEEPHILLS #1
	KH2	4.73	KEEPHILLS #2
	KH3	4.33	KEEPHILLS #3
	SD1	3.95	SUNDANCE #1
	SD2	3.95	SUNDANCE #2
	SD3	3.95	SUNDANCE #3
	SD4	3.95	SUNDANCE #4
	SD5	3.95	SUNDANCE #5
	SD6	3.95	SUNDANCE #6
	0000045411	2.10	BUCK LAKE

Location	MPID	Loss Factor(%)	Gen Name
Cold Lake	IOR1	3.41	MAHKESES COLD LAKE
	PR1	1.24	PRIMROSE
	EC04	2.67	FOSTER CREEK G1
	AFG1TX	0.56	FORTISALBERTA AL-PAC PULP MILL
	Project901_1_GEN	0.50	IMPERIAL OIL COLD LAKE EXPANSION NABIYE PLANT
East Edmonton	SCTG	2.91	SHELL SCOTFORD
	TC02	2.96	REDWATER
	ENC1	2.91	CLOVER BAR 1
	ENC2	2.91	CLOVER BAR 2
	ENC3	2.91	CLOVER BAR 3
	DOWGEN15M	3.14	DOW GTG
Red Deer	NOVAGEN15M	1.05	NOVA JOFFRE
	BIG	4.70	BIGHORN
	BRA	2.06	BRAZEAU
	SHCG	0.72	SHELL CAROLINE
Calgary	CES1	0.51	ENMAX CALGARY ENERGY CENTRE CTG
	CES2	0.51	ENMAX CALGARY ENERGY CENTRE STG
	TC01	-0.03	CARSELAND
	EC01	1.54	CAVAILIER
	NX01	0.38	BALZAC
	CRS1	0.93	ENMAX CROSSFIELD ENERGY CENTER
	CRS2	0.93	ENMAX CROSSFIELD ENERGY CENTER
	CRS3	0.93	ENMAX CROSSFIELD ENERGY CENTER
	0000025611	0.48	HARMATTAN GAS PLANT DG
	Project719_1_SUP	0.86	ENMAX SHEPARD ENERGY CENTRE
Bow Hydro	BAR	0.16	BARRIER
	BPW	-0.18	BEARSPAW
	CAS	-0.46	CASCADE
	GHO	0.26	GHOST
	HSH	0.44	HORSESHOE
	KAN	0.40	KANANASKIS
	POC	1.55	POCATERRA
	INT	2.20	INTERLAKES
	RUN	0.74	RUNDLE
	THS	0.31	THREE SISTERS
	SPR	0.72	SPRAY
South East	SCR2	3.02	SUNCOR MAGRATH
	TAY1	3.43	TAYLOR HYDRO
	0000006711	2.17	STIRLING
	SCR3	2.13	SUNCOR HILLRIDGE WIND FARM
	TAB1	1.20	TABER WIND
	MATLIMP	3.18	MONTANA TIE LINE IMPORT
	CHIN	2.50	CHIN CHUTE
	RYMD	4.03	RAYMOND RESERVOIR

Location	MPID	Loss Factor(%)	Gen Name
Battle River	BR3	6.44	BATTLE RIVER #3
	BR4	6.44	BATTLE RIVER #4
	BR5	5.60	BATTLE RIVER #5
Medicine Hat	CMH1	1.14	CITY OF MEDICINE HAT
Sheerness	SH1	4.69	SHEERNESS #1
	SH2	4.69	SHEERNESS #2
	NEP1	4.12	GHOST PINE WIND FARM
	HAL1	5.68	CAPITAL POWER HALKIRK WIND PROJECT
	SCR4	5.19	SUNCOR WINTERING HILLS WIND ENERGY PROJECT
South West	AKE1	3.06	MCBRIDE
	DRW1	3.02	DRYWOOD 1
	IEW1	3.33	SUMMERVIEW 1
	IEW2	3.33	SUMMERVIEW 2
	CR1	3.06	CASTLE RIVER
	OMRH	3.42	OLDMAN
	0000022911	2.51	GLENWOOD
	0000039611	3.11	PINCHER CREEK
	0000038511	2.24	SPRING COULEE
	CRE1	4.47	COWLEY EXPANSION 1
	CRE2	4.47	COWLEY EXPANSION 2
	CRE3	4.47	COWLEY NORTH
	CRWD	4.47	COWLEY RIDGE WIND POWER PHASE2
	0000001511	2.16	FT MACLEOD
	PKNE	4.47	COWLEY RIDGE WIND POWER PHASE1
	GWW1	3.93	SODERGLEN
	0000034911	0.66	ALTAGAS PARKLAND
	BTR1	3.99	BLUE TRAIL WIND FARM
	ARD1	4.31	TRANSALTA ARDENVILLE WIND FARM
	KHW1	3.28	KETTLES HILL WIND ENERGY PHASE 2
	CRR1	3.18	Enel Alberta Castle Rock Wind Farm
	Project519_1_GEN	3.71	ALBERTA WIND ENERGY OLD MAN RIVER WIND FARM
	Project728_1_GEN	3.60	BLACKSPRING RIDGE I WIND PROJECT
BCH	BCHIMP	2.05	BCH - Export
	BCHEXP	0.66	BCH - Import
SPC	SPCIMP	5.43	SPC - Export
	SPCEXP	2.30	SPC - Import
DOS	0000016301	-1.71	Amoco Empress (163S)
	0000079301	1.25	ANG Cochrane (793S)
	341S025	-2.45	Syncrude Standby (848S)