aeso
ALBERTA ELECTRIC SYSTEM OPERATOR

2006 Generic Stacking Order

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1.0 Purpose

The purpose of this document is to describe the 2006 Generic Stacking Order.

2.0 Introduction

The Generic Stacking Order (GSO) is a key component in the loss factor calculation, operational forecasts, planning studies, and General Tariff Application process. Generators are dispatched to meet system demand in the base cases according to the order and generation amount specified in the GSO.

The GSO contains two key pieces of information –

1. Generation supply levels on a net-to-grid basis (NTG) for 12 seasonal cases[1] (four seasons and three load levels) for all generators, and
2. Generation dispatch order.

Starting in 2006, the Rule governing the determination of the GSO generation supply levels can be located at: http://www.aeso.ca/files/May252005_FinalRules.pdf. In summary, the generation supply levels are determined using historical data for existing generators (in service for more than a year). For generators that have been in service for less than one year, the supply levels are estimated by the Incapability Factors. To determine dispatch order, a statistical analysis is used to determine a relationship between the generator output and the actual historical hourly pool price. The process is explained in the '2006 GSO Key Changes' section. AESO will request annually from generation owners confirmation that the previous year's historical data is appropriate to use. Additional blocks are used where necessary to reflect generators' multiple bidding strategies.

[1] Loss Factor base cases are relevant to NTG amount whereas operations and planning security base cases use more detailed modeling of the system including the behind the fence elements.

The TMR requirement (please refer to http://www.aeso.ca/files/ISO_OPP_2005_05_25.pdf for details) supersedes all other operational criteria and hence TMR generators are dispatched first on the list when required to fulfill the reliability criteria.

3.0 Background

In 2006, the AESO will use a new methodology, 50% Area Load Corrected R-Matrix, for the determination of generator loss factors. The new methodology reflects the requirements of the Alberta Department Of Energy (DOE) 2004 Transmission Regulation. The regulation indicates that loss factors must be calculated from the average impact of generators on the Alberta Interconnected Electrical System (AIES). The regulation directed the AESO to implement a new methodology to meet these requirements. The AESO has consulted with stakeholders in the development of the new loss factor methodology including the development of new rules for the preparation of the GSO.

Previous GSOs used generators STS contract levels as capacity amounts. Moving to a historical generation basis has several advantages, including;

- Representative of actual generator energy market dispatch for the previous period
- Addresses the issue of confidentiality of maintenance data by including actual maintenance and forced outages from the previous period
- Reduces necessity for the AESO to forecast generator / pool price relationships

4.0 2006 GSO Key Changes

The major differences between previous GSOs and the 2006 GSO are;

1. Average historical net-to-grid (NTG) output of a generator is considered for each seasonal case.

2. Generator owners are provided an opportunity to comment and suggest revisions to the GSO capacities to reflect an intent change operation in a future year.

3. The hours used for averaging the historical generator output are taken from the AIES seasonal load duration curve analysis (Please see Appendix-A of AESO Loss Factor Rules).

4. No maintenance or outage data is used in the 2006 GSO as average historical net-to-grid output of a generator inherently contains this information.

5. 12 seasonal net-to-grid generations are assigned to each individual generator at the point of supply (POS).

6. The order except for units such as wind and hydro generation, is determined by the actual price responses of the generators in each group.

7. New generators that are expected to be connected in the forecast year will be included in the GSO. These are generators with signed contracts to connect or who have made significant financial commitments to connect. Generators who have filed decommissioning plans with the AESO will be removed accordingly.

   AESO relies on the Canadian Electricity Association (CEA) information in the event of new generators or in the case of a lack of updated information from the generators on their availability. The incapability Factors (ICBF) is used to calculate the power available to the AIES. (1- ICBF) has been considered as equivalent to Available Capacity Factors (ACF). The ICBFs are obtained from CEA's latest annual report on Generation Equipment Status.

8. The 2006 GSO considers the NTG amount at the point of supply (POS). Since any given loss factor is primarily the function of net to grid amount of generation, the 2006 GSO represents an aggregate of generation at the point of supply. An equivalent generator is considered at the bus from

which the NTG amount related to the Measurement Point Identification (MPID) is obtained. For example, Horseshoe has 4 generators with a single MPID which is HSH. The 4 generators are connected to Bus 172 (12 kV). They are represented as a single unit at Bus 171 (138 kV) because the AESO billing database contains NTG data for all of these four units (related to MPID HSH) at Bus 171. The same approach is applied to the Industrial System Designations (ISD). All ISDs are represented by a single equivalent generator and load. The GSO contains a column with bus numbers for corresponding MPIDs.

9. An energy stacking order is created based on nine months of each generators historical price response. The generation energy market behavior analysis is updated with the latest historical data from the period June 1 2004 to February 28 2005. Each generator's hourly output capacity and corresponding hourly pool price are plotted and separated into equal price intervals. Then, a statistical analysis is applied to the intervals to analyze the changes between intervals. A threshold is set to determine if the change between intervals is significant. A significant change is defined as a new block. The threshold is defined as a percentage of the generating unit's MCR that results in five blocks or less. In order to avoid additional complexity for limited modeling improvement, at most two blocks are considered in the energy stacking order and reflected in the GSO. However, not all generators have a 2nd block. The statistical analysis shows that some generators have an insignificant amount of generation in the 2nd block which indicates their price insensitivity.

   The price response analysis used to construct the GSO is consistent with the losses forecast as filed with the AESO's General Tariff Application.

The 2006 GSO is similar to its predecessors in the following aspects:

1. The wind and hydro units are ranked according to their relative loss factors.

2. No bid price, specific TMR, maintenance schedules, or heat rate information is revealed.
3. Multiple blocks (two blocks) are used to represent the historical response of the generators to pool price.
4. STS contract and incapability factors (ICBF) is used to determine the amount of predicted generation level for new generators.

5.0 2006 Generic Stacking Order

The following describes the application of the GSO to the loss factor base cases:

1) Transmission Must Run (TMR) generators – the generators represent the expected TMR dispatch (of gas, combined cycle, or other units) beyond area generation energy market participation. The TMR units are listed in the AESO OPPs 501 and 510. TMR is required in specific areas of the AIES to meet reliability criteria The total net-to-grid (NTG) amount assigned to the TMR generators in the 2006 GSO is obtained from the following two sources:

   a) The average historical net-to-grid (NTG) is calculated for 12 seasonal cases in the past twelve months (June 1 2004 to May 31 2005). The AIES seasonal load duration curve analysis is used to obtain the NTG amount of each generator.

   b) The minimum TMR requirement is obtained using OPPs 501 and 510.

      According to the OPPs when the area criteria requirement is not met by the generation from local generators through energy market dispatches, TMR dispatches will be issued to TMR-contracted generators to make up the shortfall. TMR-contracted generators will be dispatched according to the TMR dispatch orders. The actual TMR dispatch order is confidential to the AESO.

Area load is required to determine the minimum TMR requirement for any TMR area such as North-West area. The minimum TMR requirement is function of local area load. The area load forecast is applied for high, medium and low seasonal cases. Using the historical hourly area load levels and using the regression analysis as explained in Appendix-A of the AESO Rule on Loss Factors, a minimum TMR generation requirement is assigned to generators listed in the OPPs according to these seasonal load levels. The historical TMR level as calculated in Appendix A is adjusted as per the relevant OPP if necessary to meet the minimum reliability requirements.

2) Most of the data used in 2006 GSO such as Alberta system load, hourly pool price and generation amount at each POS are historical and taken from the most recent 12 months' data found in the AESO's billing system. The data extraction period is June 1 2004 to May 31 2005.

3) In general, the energy stacking order is formed to more closely reflect an actual operational perspective. The generators may bid multiple blocks but the typical block size beyond the 2nd block is very small

4) **Wind Generation** – Wind generation does not have a relationship to pool price.

5) **Small Power Research & Development** – The relative order remains the same as the 2005 GSO. SPR&D generators are exempt by law from paying for losses.

6) **Distribution Connected Generation** – consists of distribution connected generators with STS contracts who occasionally supplies power to the AIES. Several prime movers may exist at a distribution generation location. The placement of the distribution generation in the stacking order is determined mainly by the predominant source of generation at the STS location and ranked by historical hourly pool price.

7) **Preliminary Generation** – consists of the generators with preliminary status. These generators do not have a contract with the AESO but are included in the 2006 GSO as it is expected they will connect.

2006 Generic Stacking Order Version 1 - Released August 18, 2005.

New SO Number	Gen with 2nd Block	Name	Generation Type	Winter Peak Capacity, MW*	Winter Med Capacity, MW*	Winter Low Capacity, MW*	Spring Peak Capacity, MW*	Spring Med Capacity, MW*	Spring Low Capacity, MW*	Summer Peak Capacity, MW*	Summer Med Capacity, MW*	Summer Low Capacity, MW*	Fall Peak Capacity, MW*	Fall Med Capacity, MW*	Fall Low Capacity, MW*
1	1	BEAR CREEK G2	Co-Cycle	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	1	BEAR CREEK G1	Co-Cycle	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	1	POPLAR HILL	Gas	SCM	SCM	off	SCM	off	off	off	off	off	SCM	off	off
4	1	VALLEYVIEW	Gas	off	SCM	off	SCM	off	off	off	off	off	SCM	off	off
5	1	FORT NELSON	Gas	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
6	1	RAINBOW 4, RL1	Co-gen	45.0	45.0	45.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
7	1	RAINBOW 5	Gas	25.0	20.0	10.0	20.0	20.0	10.0	10.0	10.0	10.0	20.0	10.0	10.0
8	1	RAINBOW 2	Gas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	1	CALPINE CTG	Co-Cycle	100.0	0.0	0.0	0.0	0.0	0.0	45.0	0.0	0.0	45.0	0.0	0.0
10	1	CALPINE STG	Co-Cycle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11		CASTLE RIVER	Wind	8.2	15.2	22.2	13.3	12.2	9.7	4.2	5.4	8.0	22.0	15.2	13.3
12		McBRIDE	Wind	18.5	31.6	55.4	26.3	25.5	24.1	6.5	13.0	20.1	45.0	30.0	30.9
13		SUNCOR MAGRATH	Wind	13.5	13.5	13.5	10.3	10.3	10.3	7.7	7.7	7.7	11.4	11.4	11.4
14		SUMMERVIEW 1	Wind	30.8	30.8	30.8	23.5	23.5	23.5	17.5	17.5	17.5	26.1	26.1	26.1
15		COWLEY RIDGE WIND POWER PHASE1	Wind	2.2	3.4	5.0	4.1	3.0	2.6	1.3	1.6	2.0	4.9	3.8	3.2
16		COWLEY EXPANSION 1	Wind	0.2	0.3	0.4	0.3	0.2	0.2	0.1	0.1	0.2	0.4	0.3	0.2
17		COWLEY EXPANSION 2		0.2	0.3	0.4	0.3	0.3	0.2	0.1	0.2	0.2	0.4	0.4	0.3
18		COWLEY NORTH	Wind	5.0	6.9	9.9	7.1	5.4	4.4	2.0	2.8	4.2	9.5	7.1	6.0
19		COWLEY RIDGE WIND POWER PHASE2	Wind	2.1	3.1	4.5	3.6	2.6	2.1	1.0	1.4	1.9	4.5	3.3	2.7
20		BENIGN KETTLES HILL	Wind	28.4	28.4	28.4	21.7	21.7	21.7	16.1	16.1	16.1	24.0	24.0	24.0
21		TABER WIND	Preliminary	36.0	36.0	36.0	27.5	27.5	27.5	20.5	20.5	20.5	30.5	30.5	30.5
22		TAYLOR WIND PLANT	Wind	0.9	1.2	1.7	1.2	1.2	1.2	0.3	0.5	0.7	1.6	1.2	1.0
23		PINCHER CREEK	DG (Wind)	0.1	0.6	2.2	0.2	0.4	0.5	0.0	0.0	0.0	0.2	0.2	0.5
24		WESGEN	Bio-mass	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25		WHITE COURT	Bio-mass	23.3	23.2	23.2	24.3	22.4	22.7	22.6	22.4	23.8	24.2	22.3	22.6
26		BRIDGE CREEK	Gas-decomp	3.3	3.4	3.6	3.7	3.6	3.9	2.9	3.0	1.9	3.3	3.4	3.6
27		DRAYTON VALLEY PL IPP	Bio-mass	8.3	8.8	8.9	6.7	8.0	8.6	8.9	9.7	10.2	10.2	9.8	9.9
28		BELLY RIVER IPP	Hydro	0.0	0.0	0.0	0.8	1.3	1.3	2.8	2.8	2.8	0.0	1.3	1.5
29		CHIN CHUTE	Hydro	0.0	0.0	0.0	2.0	2.8	3.2	10.2	9.5	8.5	0.0	4.4	5.0
30		DICKSON DAM 1	Hydro	4.8	4.7	4.7	5.6	6.8	7.1	10.9	12.2	12.5	5.0	7.9	8.3
31		WATER IPP	Hydro	1.0	1.5	1.7	1.3	1.0	0.9	1.0	1.2	1.7	1.2	1.5	1.6
32		ST MARY IPP	Hydro	2.2	2.2	2.2	1.2	1.2	1.2	1.4	1.4	1.0	2.1	1.7	1.7
33		RAYMOND RESERVOIR	Hydro	0.0	0.0	0.0	4.1	4.8	5.4	18.9	16.3	13.0	0.0	6.1	7.0
34		DOW GTG	Co-gen	18.2	2.9	0.0	0.0	0.6	0.7	3.6	1.1	1.3	0.0	2.3	0.2
35	1	FOSTER CREEK G1	Co-gen	64.0	64.4	65.5	57.0	43.4	45.0	57.3	57.3	59.6	52.7	53.1	51.7
36		MAHKESES, COLD LAKE	Co-gen	52.1	49.9	48.1	46.7	43.8	43.6	39.4	52.8	65.6	45.5	51.7	52.7
37	1	NOVA JOFFRE	Co-gen	146.2	138.4	125.6	110.3	85.4	72.1	140.6	128.4	124.3	119.0	108.3	105.2
38	1	MUSGKEG	Co-gen	60.3	53.0	48.2	51.4	47.0	42.7	56.0	42.9	38.9	56.5	49.7	39.2
39	1	McKAY RIVER	Co-gen	151.1	132.7	116.9	123.1	116.8	106.3	111.9	113.3	84.1	130.8	108.0	104.9
40	1	PRIMROSE	Co-gen	45.9	43.1	41.2	35.8	35.2	35.8	32.9	35.6	38.9	30.0	25.2	26.5
41	1	SUNCOR MILLENIUM	Co-gen	142.7	144.2	138.0	147.3	107.7	94.3	83.4	96.4	106.2	130.1	121.2	112.5
42	1	CARSELAND	Co-gen	73.0	62.2	52.9	63.1	59.7	55.7	52.6	56.1	57.0	51.5	60.8	55.4
43	1	REDWATER	Co-gen	24.6	20.2	13.7	21.3	17.3	13.6	16.4	17.4	17.3	21.5	16.9	14.8
44		SYNCRUDE AURORA	Co-gen	5.0	9.9	6.8	19.1	6.2	5.5	4.0	10.4	11.2	0.0	11.7	13.2
45		DIASHOWA	Co-gen	0.1	0.3	0.5	0.4	0.3	0.4	0.4	0.4	1.0	0.3	0.5	0.5
46	1	BALZAC	Co-Cycle	9.9	1.3	0.0	0.3	0.9	0.2	55.1	19.3	4.8	4.6	12.4	4.9
47		CITY MEDICINE HAT	Gas	2.8	3.1	2.0	1.3	1.5	0.9	17.7	8.3	7.3	5.1	11.0	6.5
48		SHELL SCOTFORD	Co-gen	2.7	1.2	0.2	0.0	0.1	0.0	0.1	0.1	0.0	6.4	2.4	0.5

49		NORTHSTONE ELMWORTH	Co-gen	1.8	0.5	0.0	0.1	0.5	0.0	2.3	0.3	0.0	1.8	0.7	0.0
50	1	CAVALIER	Co-Cycle	6.9	3.4	0.3	17.0	15.1	7.5	37.0	16.3	7.3	13.8	22.8	6.0
51		P&G WEYERHAUSER	Co-gen	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0
52		GRANDE PRAIRIE ECOPOWER CENTRE	Co-gen	17.8	17.8	17.8	21.8	21.8	21.8	17.8	17.8	17.8	17.8	17.8	17.8
53		PLAMONDON	DG (Co-gen)	0.1	0.6	0.7	1.1	0.8	0.9	0.1	0.2	0.4	0.3	0.2	0.2
54	1	POCATERRA	Hydro	9.8	4.9	0.0	9.1	4.2	0.0	4.2	0.7	0.0	12.0	7.0	0.3
55	1	INTERLAKES	Hydro	3.4	1.6	0.1	1.6	0.7	0.0	2.2	0.3	0.0	3.9	2.8	0.2
56	1	CASCADE	Hydro	14.3	7.1	0.2	9.4	7.3	0.8	4.1	0.8	0.0	15.0	8.6	0.7
57	1	HORSESHOE	Hydro	9.6	7.5	7.5	9.3	8.6	8.2	12.5	12.0	12.2	10.3	10.2	10.0
58	1	KANANASKIS	Hydro	10.2	7.8	7.8	10.3	9.3	8.5	14.2	14.3	14.8	10.7	11.2	10.4
59	1	BARRIER	Hydro	7.1	4.1	0.3	5.8	5.7	0.4	7.7	3.5	0.3	8.7	6.7	1.1
60	1	RUNDLE	Hydro	14.8	8.9	2.1	12.7	10.7	1.7	7.9	5.3	0.3	13.1	12.0	2.6
61	1	THREE SISTERS	Hydro	1.2	0.7	0.3	0.1	0.1	0.0	0.8	0.3	0.0	1.6	1.3	0.6
62	1	GHOST	Hydro	21.7	10.4	2.0	17.8	15.6	4.2	29.9	21.8	15.9	28.0	19.9	6.5
63	1	SPRAY	Hydro	38.9	24.1	5.8	34.0	28.6	4.5	19.2	13.6	0.8	35.4	32.1	6.8
64	1	BEARSPAW	Hydro	5.1	5.5	6.1	6.3	6.4	6.8	10.0	10.7	11.6	6.2	6.9	7.6
65	1	BIGHORN	Hydro	56.5	35.2	23.4	41.9	38.2	25.0	58.5	36.7	18.3	59.7	48.6	25.4
66		TAYLOR HYDRO	Hydro	0.0	0.0	0.0	2.9	3.8	4.2	13.1	11.9	9.9	0.0	4.9	5.6
67		OLDMAN	Hydro	4.9	7.0	8.6	11.3	13.3	14.0	22.1	22.6	24.3	7.7	12.5	13.0
68	1	BRAZEAU	Hydro	75.6	28.6	0.6	48.2	39.4	5.3	92.4	32.9	1.0	82.6	50.6	8.0
69		STIRLING	DG (Hydro)	0.0	0.0	0.0	0.2	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0
70	1	BATTLE RIVER #3	Coal	112.9	115.6	114.0	121.8	85.9	77.0	75.2	97.6	105.8	116.7	122.4	116.2
71	1	BATTLE RIVER #4	Coal	135.1	131.2	123.1	133.6	123.2	116.5	106.0	109.8	95.8	138.8	128.9	121.1
72	1	BATTLE RIVER #5	Coal	322.6	325.4	335.9	343.4	333.5	323.5	220.1	212.9	120.5	350.4	343.3	321.2
73	1	GENESEE 3	Coal	329.8	329.8	329.8	329.8	329.8	329.8	329.8	329.8	329.8	329.8	329.8	329.8
74	1	GENESEE 1	Coal	283.9	271.7	281.4	287.7	279.5	280.4	288.5	288.5	290.2	274.2	275.0	274.8
75	1	GENESEE 2	Coal	264.6	271.6	272.9	282.0	280.7	278.3	279.4	270.2	266.6	253.0	199.7	199.9
76	1	HR MILNER	Coal	52.4	45.7	40.0	51.1	48.8	42.9	54.6	47.4	41.0	52.9	50.0	41.5
77	1	KEEPHILLS #1	Coal	355.6	305.3	271.7	352.3	350.4	353.7	354.1	335.6	352.9	368.0	323.7	309.9
78		KEEPHILLS #2	Coal	327.6	332.8	303.7	352.3	338.6	332.8	379.8	379.3	379.3	302.2	190.8	194.3
79	1	SUNDANCE #1	Coal	218.4	217.4	218.9	216.0	221.9	217.9	29.7	81.6	167.7	222.0	194.3	182.6
80	1	SUNDANCE #2	Coal	227.7	216.2	207.8	228.4	219.2	211.1	203.1	210.0	185.3	214.5	202.5	200.4
81		SUNDANCE #3	Coal	336.2	333.6	336.3	307.7	317.0	306.1	330.3	328.6	339.7	344.7	241.4	225.1
82		SUNDANCE #4	Coal	304.2	291.4	264.7	321.5	316.0	306.9	313.0	316.2	281.7	238.4	313.9	310.5
83		SUNDANCE #5	Coal	341.5	325.0	318.9	270.7	261.6	243.7	243.7	314.1	281.9	350.3	351.3	345.5
84	1	SUNDANCE #6	Coal	330.4	307.6	279.3	305.4	296.0	280.0	333.3	318.0	328.7	338.7	313.8	301.0
85	1	SHEERNESS 1	Coal	336.4	310.4	269.0	329.5	310.2	280.9	294.7	203.2	49.6	335.6	333.1	324.8
86	1	SHEERNESS 2	Coal	304.2	301.0	293.4	254.0	217.9	196.5	328.5	320.6	312.7	328.4	317.4	303.6
87	1	WABAMUN #4	Coal	228.3	226.1	212.4	237.8	223.9	229.1	201.3	152.9	48.8	233.2	216.5	212.9
88	2	SHEERNESS 2	Coal	49.8	49.3	48.1	41.6	35.7	32.2	53.8	52.5	51.2	53.8	52.0	49.7
89	2	GENESEE 3	Coal	117.5	117.5	117.5	117.5	117.5	117.5	117.5	117.5	117.5	117.5	117.5	117.5
90	2	GENESEE 1	Coal	90.7	86.8	89.9	91.9	89.3	89.6	92.2	92.2	92.7	87.6	87.9	87.8
91	2	GENESEE 2	Coal	94.2	96.8	97.2	100.5	100.0	99.1	99.5	96.3	95.0	90.1	71.2	71.2
92	2	HR MILNER	Coal	42.2	36.8	32.2	41.1	39.3	34.5	44.0	38.1	33.0	42.6	40.3	33.4
93	2	KEEPHILLS #1	Coal	11.4	9.8	8.7	11.3	11.3	11.4	11.4	10.8	11.4	11.8	10.4	10.0
94	2	SUNDANCE #2	Coal	49.4	46.9	45.1	49.6	47.6	45.8	44.1	45.6	40.2	46.6	44.0	43.5
95	2	SUNDANCE #6	Coal	50.3	46.8	42.5	46.5	45.1	42.6	50.7	48.4	50.0	51.6	47.8	45.8
96	2	SUNDANCE #1	Coal	49.7	49.5	49.8	49.1	50.5	49.6	6.8	18.6	38.2	50.5	44.2	41.6
97	2	WABAMUN #4	Coal	10.9	10.8	10.1	11.3	10.7	10.9	9.6	7.3	2.3	11.1	10.3	10.1
98	2	SHEERNESS 1	Coal	52.3	48.2	41.8	51.2	48.2	43.6	45.8	31.6	7.7	52.1	51.7	50.5
99	2	BATTLE RIVER #3	Coal	14.5	14.8	14.6	15.6	11.0	9.9	9.6	12.5	13.6	15.0	15.7	14.9
100	2	BATTLE RIVER #4	Coal	16.8	16.4	15.3	16.7	15.4	14.5	13.2	13.7	12.0	17.3	16.1	15.1
101	2	BATTLE RIVER #5	Coal	22.7	22.9	23.7	24.2	23.5	22.8	15.5	15.0	8.5	24.7	24.2	22.6
102	2	POCATERRA	Hydro	1.4	0.7	0.0	1.3	0.6	0.0	0.6	0.1	0.0	1.8	1.0	0.0
103	2	INTERLAKES	Hydro	0.3	0.1	0.0	0.1	0.1	0.0	0.2	0.0	0.0	0.3	0.2	0.0
104	2	CASCADE	Hydro	4.8	2.4	0.1	3.1	2.5	0.3	1.4	0.3	0.0	5.0	2.9	0.3

105	2	HORSESHOE	Hydro	1.5	1.2	1.2	1.5	1.3	1.3	2.0	1.9	1.9	1.6	1.6	1.6
106	2	KANANASKIS	Hydro	1.9	1.4	1.5	1.9	1.7	1.6	2.6	2.7	2.8	2.0	2.1	1.9
107	2	BARRIER	Hydro	1.7	1.0	0.1	1.4	1.4	0.1	1.9	0.9	0.1	2.1	1.7	0.3
108	2	RUNDLE	Hydro	2.9	1.8	0.4	2.5	2.1	0.3	1.6	1.0	0.1	2.6	2.4	0.5
109	2	THREE SISTERS	Hydro	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0
110	2	GHOST	Hydro	10.9	5.2	1.0	9.0	7.8	2.1	15.0	11.0	8.0	14.1	10.0	3.3
111	2	SPRAY	Hydro	12.4	7.7	1.9	10.9	9.1	1.4	6.1	4.4	0.3	11.3	10.3	2.2
112	2	BEARSPAW	Hydro	1.3	1.4	1.6	1.6	1.7	1.7	2.6	2.7	3.0	1.6	1.8	1.9
113	2	BIGHORN	Hydro	15.6	9.7	6.5	11.6	10.6	6.9	16.2	10.2	5.1	16.5	13.4	7.0
114	2	BRAZEAU	Hydro	32.9	12.4	0.2	21.0	17.1	2.3	40.2	14.3	0.4	35.9	22.0	3.5
115	2	CALPINE CTG	Co-Cycle	19.6	51.8	7.2	66.2	22.0	6.7	89.0	51.0	18.0	76.3	89.9	52.0
116	2	CALPINE STG	Co-Cycle	65.3	29.2	3.3	40.0	13.5	3.9	88.5	32.9	11.9	67.4	53.9	31.8
117	2	CARSELAND	Co-gen	11.8	10.0	8.5	10.2	9.6	9.0	8.5	9.1	9.2	8.3	9.8	9.0
118	2	CAVAILIER	Co-Cycle	7.9	3.9	0.4	19.6	17.4	8.7	42.7	18.8	8.4	15.9	26.3	6.9
119	2	BALZAC	Co-Cycle	5.1	0.7	0.0	0.2	0.5	0.1	28.5	10.0	2.5	2.4	6.4	2.5
120	2	MUSGKEG	Co-gen	14.6	12.9	11.7	12.4	11.4	10.3	13.6	10.4	9.4	13.7	12.0	9.5
121	2	NOVA JOFFRE	Co-gen	15.9	15.3	14.2	9.2	7.1	6.0	15.5	14.3	13.4	13.8	13.0	12.8
122	2	SUNCOR MILLENIUM	Co-gen	31.8	32.2	30.8	32.9	24.0	21.0	18.6	21.5	23.7	29.0	27.0	25.1
123	2	FOSTER CREEK G1	Co-gen	5.7	5.7	5.8	5.0	3.8	4.0	5.1	5.1	5.3	4.7	4.7	4.6
124	2	PRIMROSE	Co-gen	5.2	4.9	4.6	4.0	4.0	4.0	3.7	4.0	4.4	3.4	2.8	3.0
125	2	REDWATER	Co-gen	5.6	4.6	3.1	4.9	3.9	3.1	3.7	4.0	3.9	4.9	3.9	3.4
126	2	BEAR CREEK G2	Co-Cycle	0.0	10.8	9.7	11.7	11.0	10.5	17.4	18.5	23.2	8.1	15.6	14.7
127	2	McKAY RIVER	Co-gen	12.6	11.0	9.7	10.2	9.7	8.8	9.3	9.4	7.0	10.9	9.0	8.7
128		ROSSDALE 9	Gas	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.4	0.0	0.0	1.3	0.6
129		CLOVERBAR 3	Gas	16.4	4.0	3.7	0.0	0.2	0.2	24.2	5.8	0.0	2.8	6.7	4.9
130		ROSSDALE 8	Gas	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.5	0.0	0.0	0.7	0.4
131		ROSSDALE 10	Gas	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.3	0.0	0.0	0.0	0.0
132		CLOVERBAR 4	Gas	22.1	6.5	3.6	4.3	2.2	0.7	45.5	15.8	16.8	0.0	22.0	8.9
133		DRYWOOD 1	Gas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
134	2	FORT NELSON	Gas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135	2	POPLAR HILL	Gas	24.3	8.7	0.0	10.9	2.3	0.4	1.2	1.9	0.0	2.2	1.0	0.3
136	2	RAINBOW 5	Gas	0.0	0.0	4.2	8.0	3.6	8.5	20.0	12.9	12.4	0.0	0.0	0.0
137	2	RAINBOW 4, RL1	Co-gen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
138	2	RAINBOW 2	Gas	12.0	8.1	11.1	1.8	2.5	1.2	23.4	23.3	24.4	31.7	30.5	30.7
139	2	BEAR CREEK G1	Co-Cycle	4.8	4.9	0.1	2.7	9.0	6.3	41.1	24.0	20.2	19.5	26.6	23.6
140	2	VALLEYVIEW	Gas	4.8	0.9	0.0	1.5	0.9	0.1	0.1	0.0	0.0	0.6	0.8	0.5
141		CLOVERBAR 2	Gas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142		CLOVERBAR 1	Gas	2.8	0.5	0.3	0.0	3.5	1.2	0.0	0.0	0.0	0.0	0.0	0.0
143		STURGEON 1	Gas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
144		STURGEON 2	Gas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145		RAINBOW 3	Gas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
146		RAINBOW 1	Gas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147		GLENWOOD	DG	0.0	0.0	0.2	0.1	0.1	0.1	0	0	0	0.0	0.0	0.0
148		SPRING COULEE	DG	0	0	0	0	0	0	0	0	0	0	0	0
149		ALPAC	Preliminary	39.2	39.2	39.2	39.2	39.2	39.2	39.2	39.2	39.2	39.2	39.2	39.2
150		GW POWER SODERGLEN	Preliminary	31.7	31.7	31.7	24.3	24.3	24.3	18.0	18.0	18.0	26.9	26.9	26.9
151		MEG ENERGY	Preliminary	72.1	72.1	72.1	72.1	72.1	72.1	72.1	72.1	72.1	72.1	72.1	72.1
152		BLUE TRAIL	Preliminary	27.0	27.0	27.0	20.6	20.6	20.6	15.4	15.4	15.4	22.9	22.9	22.9
153		SUMMERVIEW PHASE 2	Preliminary	27.0	27.0	27.0	20.6	20.6	20.6	15.4	15.4	15.4	22.9	22.9	22.9
154		CHIN CHUTE	Preliminary	13.5	13.5	13.5	10.3	10.3	10.3	7.7	7.7	7.7	11.4	11.4	11.4
155		CASTLE ROCK RIDGE	Preliminary	50.4	50.4	50.4	38.5	38.5	38.5	28.7	28.7	28.7	42.7	42.7	42.7

*** Capacity is determined as per AESO rules for the periods defined.**
Released in conjunction with the 2006 GSO document dated August, 2005.