



# **Attachment A to the Straw Proposal:**

## **Illustrative Constraint & Contingency Lists**

### **Data Release & Accessibility** *Phase 1: Transmission Constraints*

**December 3, 2009**

## Overview

The California ISO proposes to provide the following constraint and contingency list information in the formats illustrated in the following tables. This proposal is described in more detail in the 12/3/2009 Straw Proposal on Phase 2 Convergence Bidding Information Release, which is part of the Data Release & Accessibility Initiative.

**Table 1: Flowgate Constraints**

To Be Published Daily at Close of the Day Ahead Market

**Table 2: Transmission Corridor Constraints**

To Be Made Available with Each Model Build

**Table 3: Nomogram Constraints**

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**Table 4: List of Transmission Contingencies**

To Be Published Daily at Close of the Day Ahead Market

**Table 1  
Flowgate Constraints  
To Be Published Daily at Close of the Day Ahead Market**

Name of Flowgate	Type	Enforce	Competitive	<b>LEGEND</b>	
1XXX1_STATIONA_VL.X_1XXX2_STATIONB_VL.Y_BR_1_1	LINE	Yes	Yes		
1XXX3_STATIONC_VL.X_1XXX4_STATIOND_VL.Y_BR_2_1	LINE	Yes	No	XFMR	Transformer in station transforming from one voltage level to another
1XXX5_STATIONE_VL.X_1XXX6_STATIONF_VL.Y_BR_1_1	LINE	No	Yes	PSHH	Phase shafter holder controlling flow
1XXX7_STATIONG_VL.X_1XXX8_STATIONH_VL.Y_BR_2_1	LINE	No	No	SERD	Series device (capacity, reactor)
1XXX1_STATIONA_VL.X_1XX10_STATIONA_VLL_XF_1	XFMR	Yes	Yes	TCOR	Transmission Corridor
1XXX3_STATIONC_VL.X_1XX13_STATIONC_VLL_XF_1	XFMR	Yes	No		
1XXX5_STATIONE_VL.X_1XX15_STATIONE_VLL_XF_1	XFMR	No	Yes		
1XXX7_STATIONG_VL.X_1XX17_STATIONG_VLL_XF_1	XFMR	No	No		
	PHSH	No	No		

**Table 1  
Flowgate Constraints  
To Be Published Daily at Close of the Day Ahead Market**

Name of Flowgate	Type	Enforce	Competitive
11XX1_STATIONX_115_11XX2_STATIONX_115_PS_1			
99XX1_STA-STB_VLL_99XX2_STB-STA_VLL_BR_1_1	SERD	Yes	No
MARKETSCHLIMITA_MSL	TCOR	Yes	Yes
MARKETSCHLIMITB_MSL	TCOR	Yes	No
MARKETSCHLIMITC_MSL	TCOR	No	Yes
MARKETSCHLIMITD_MSL	TCOR	No	No
BRANCHGRPA_BG	TCOR	Yes	Yes
BRANCHGRPB_BG	TCOR	Yes	No
BRANCHGRPC_BG	TCOR	No	Yes
BRANCHGRPD_BG	TCOR	No	No
BRANCHA_NG	TCOR	No	No

**Table 2**  
**Transmission Corridor Constraints**  
**To Be Made Available with Each Model Build**

Branch Group Name	Equipment Type	Station Name	Voltage Level	Equipment Name
MARKETSCHLIMITA_MSL	LINE	STATIONX	500	15XX1_STATIONX_500_1XX1_EXTSUBA_500_BR_1_1
MARKETSCHLIMITA_MSL	LINE	STATIONX	500	15XX1_STATIONX_500_1XX1_EXTSUBA_500_BR_2_1
MARKETSCHLIMITA_MSL	LINE	STATIONY	500	16XX2_STATIONY_500_2XXX1_EXTSUBB_500_BR_1_1
MARKETSCHLIMITA_MSL	XFMR	EXTSUBB	500	2XXX2_EXTSUBB_500_2XXX12_EXTSUBB_230_XF_1
MARKETSCHLIMITB_MSL	LINE	NOWHERE	500	15XX1_NOWHERE_500_16XX1_NOWHWST_500_BR_1_1
MARKETSCHLIMITB_MSL	LINE	NOWHERE	500	15XX1_NOWHERE_500_16XX1_NOWHWST_500_BR_2_1
MARKETSCHLIMITB_MSL	LINE	SMWHERE	230	24XX1_SMWHERE_230_19XX1_SMWHEAST_230_BR_1_1
MARKETSCHLIMITB_MSL	LINE	SMWHERE	230	24XX1_SMWHERE_230_19XX1_SMWHEAST_230_BR_2_1
MARKETSCHLIMITC_MSL	LINE	EASTSUB	500	34XX1_EASTSUB_500_34X11_NOEASTSB_500_BR_1_1
MARKETSCHLIMITC_MSL	LINE	EASTSUB	500	34XX1_EASTSUB_500_34X11_NOEASTSB_500_BR_2_1
MARKETSCHLIMITC_MSL	XFMR	EASTSUB	230	34XX1_EASTSUB_500_3XX1_EASTSUB_230_XF_1
MARKETSCHLIMITD_MSL	LINE	RADIALSB	230	4X10_RADIALSB_500_4X21_EXTSUBC_500_BR_1_1
BRANCHGRPA_BG	XFMR	INTERNSB	230	6XX4_INTERNSB_230_24XX7_INTERNSB_115_XF_1
BRANCHGRPA_BG	XFMR	INTERNSB	230	6XX4_INTERNSB_230_24XX7_INTERNSB_115_XF_2
BRANCHGRPA_BG	LINE	MTNSUB	230	18XX0_MTNSUB_230_6XX1_DSRTSB_230_BR_2_1

**Table 2  
Transmission Corridor Constraints  
To Be Made Available with Each Model Build**

Branch Group Name	Equipment Type	Station Name	Voltage Level	Equipment Name
BRANCHGRPA_BG	LINE	MTNSUB	230	18XX0_MTNSUB_230_6XX1_DSRTSB_230_BR_2_1
BRANCHGRP_BG	LINE	OCEANSB	230	9XX1_OCEANSB_230_9XX2_NRBYSB_230_BR_1_1
BRANCHGRP_BG	LINE	SEASIDE	230	9XX3_SEASIDE_230_6XX6_LOSTSB_230_BR_1_1
BRANCHGRPC_BG	LINE	VERTXSB	230	8XX8_VERTXSB_230_6XX6_GALAXYSB_230_BR_1_1
BRANCHGRPC_BG	LINE	ZENITHSB	230	8XX7_ZENITHSB_230_9XX7_UVERSSB_230_BR_1_1
BRANCHGRPD_BG	LINE	SLINESB	230	19XX9_SLINESB_230_19XX8_SLINESB_60_XF_1
BRANCH_A_NG	XFMR	SMLTNLD	115	31XX8_SMLTNLD_115_31XX7_SMLTNLD_60_XF_3
BRANCH_A_NG	XFMR	SMLTNLD	115	31XX6_SMLTNLD_115_31XX5_SMLTNLD_230_XF_4

**Table 3**  
**Nomogram Constraints**  
**To Be Published Daily at Close of the Day Ahead Market**

Nomogram Name	Resource Name	Coefficient	Corridor Name	Flowgate	Station Name	Enforced	Competitive
T-XXX SOL-XX_NG_SUM		0.3	CORRIDOR1_NG1	3XXX2_ESTTNSB_115_32XX0_DNTNSB_115_BR_1_1	ESTNSB	Yes	No
T-XXX SOL-XX_NG_SUM		1	CORRIDOR2_NG2	3XXX8_WSTNSB_115_32XX0_DNTNSB_115_BR_2_1	WSTNSB	Yes	No
G-XXX	STEAM_7_UNIT 1	1				No	No
G-XXX	STEAM_7_UNIT 2	1				No	No
G-XXX	HYDRO_7_UNIT 3	1				No	No

**Table 4**  
**List of Transmission Contingencies**  
**To Be Published Daily at Close of the Day Ahead Market**

Title	Enforced	Zone	Equipment Station	Equipment Voltage	PTI From Bus Number	PTI From Bus kV	PTI To Bus Number	PTI To Bus kV	PTI Circuit ID	Equipment Status
mTC1-SUNNY-CLOUDY	Yes	TAC-1	SUNNYSB	115	32XX1	115	31XX1	115	' 1'	OP
mTC1-SUNNY-CLOUDY	Yes	TAC-1	SUNNYSB	115	32XX1	115	31XX1	115	2'	OP
mTC1-SUNNY-CLOUDY	Yes	TAC-1	CLOUDYSB	115	31XX1	115	32XX1	115	' 1'	OP
mTC1-SUNNY-CLOUDY	Yes	TAC-1	CLOUDYSB	115	31XX1	115	32XX1	115	2'	OP
mTC2-OUTAGE-SPECIAL	No	TAC-2	BRDGSB	115	39XX1	115	37XX1	115	' 1'	OP
mTC2-OUTAGE-SPECIAL	No	TAC-2	BRDGSB	60	39XX2	115	37XX2	115	' 1'	CL
mTC2-OUTAGE-SPECIAL	No	TAC-2	TRBWTR	115	37XX1	115	39XX1	115	' 1'	OP
mTC2-OUTAGE-SPECIAL	No	TAC-2	TRBWTR	50	37XX2	115	39XX2	115	' 1'	CL