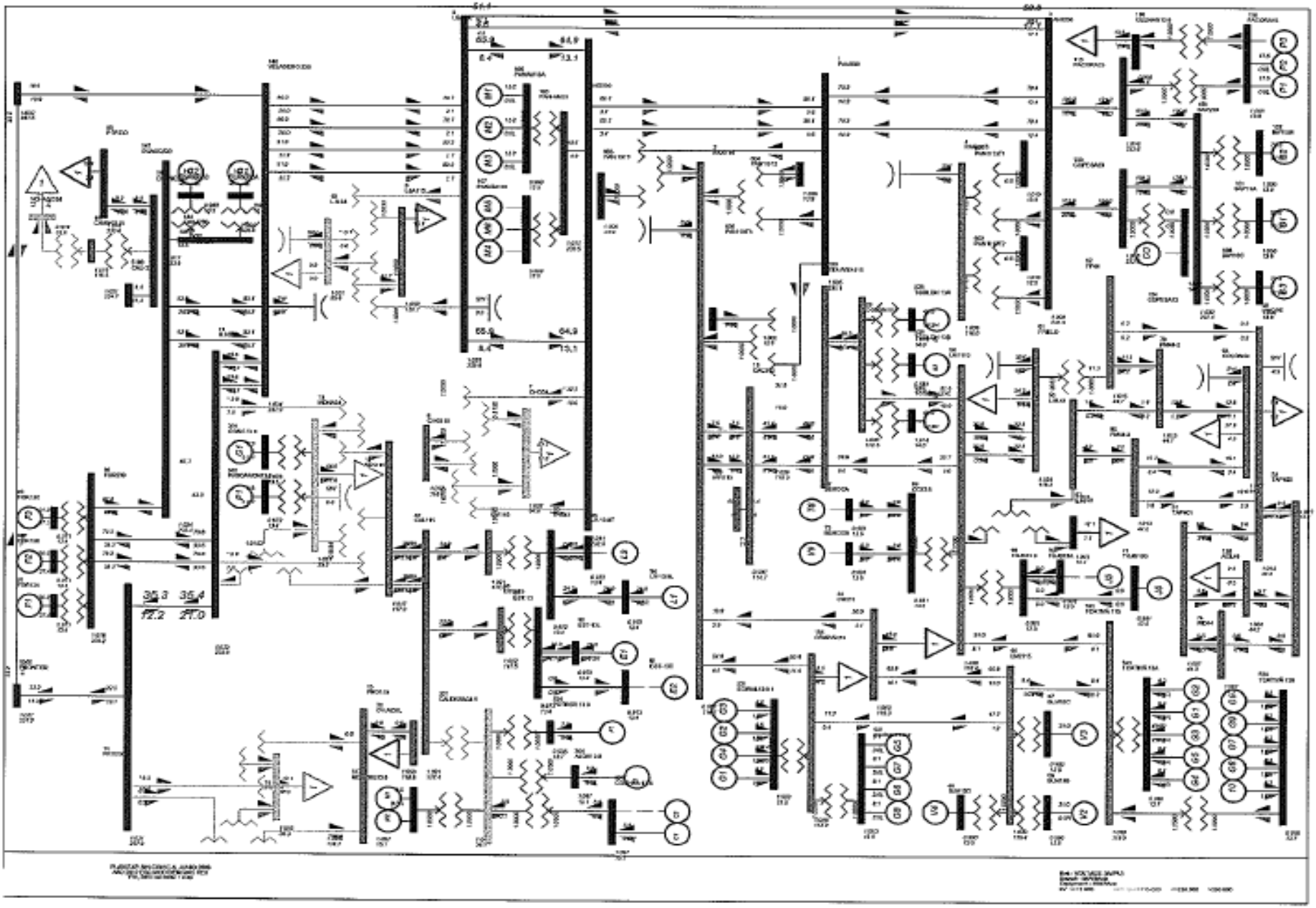
ANEXO 4 – CORTO PLAZO

RESULTADOS DE
ANALISIS DE FLUJOS DE POTENCIA
ESTABILIDAD TRANSITORIA
CORTOCIRCUITO

RESULTADOS DE FLUJOS DE POTENCIA

INDICE GENERAL

2010
Demanda Máxima de Verano



PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E FRI, DEC 04 2009 13:26
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2010 ESC MOD DEM MAX VER

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
1	PAN230	230.00	6	1.0047	231.08	3	PANII230	230.00	6	1.0084	231.94
5	CHO230	230.00	6	1.0108	232.48	8	LSA230	230.00	6	1.0295	236.78
11	M.N230	230.00	6	1.0253	235.81	14	PRO230	230.00	6	1.0306	237.03
85	PTP230	230.00	6	1.0159	233.65	96	FOR230	230.00	6	1.0185	234.24
100	BAY230	230.00	6	1.0321	237.39	103	COPESA23	230.00	6	1.0123	232.83
105	PAN-AM23	230.00	6	1.0108	232.48	115	PACORA23	230.00	6	1.0155	233.57
144	CANJ230	230.00	6	1.0236	235.43	147	GUASQ230	230.00	6	1.0237	235.44
148	VELADERO 230	230.00	6	1.0344	237.91	190	CHANG230	230.00	6	1.0169	233.88
6000	FRONTER	230.00	6	1.0313	237.20						

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)

* NONE *

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E FRI, DEC 04 2009 13:26
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2010 ESC MOD DEM MAX VER

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
4	PANII115	115.00	6	1.0089	116.02	6	CHO115	115.00	6	1.0119	116.37
9	LSA115	115.00	6	1.0499	120.74	12	M.N115	115.00	6	1.0172	116.98
15	PRO115	115.00	6	1.0324	118.72	20	CH.AZUL	115.00	6	1.0331	118.81
23	CH115	115.00	6	1.0025	115.29	52	TOC115	115.00	6	1.0064	115.74
54	LM1115	115.00	6	1.0296	118.41	55	LM2115	115.00	6	1.0300	118.45
61	FFIELD	115.00	6	1.0275	118.17	87	CAL115	115.00	6	1.0212	117.44
88	EST115	115.00	6	1.0218	117.50	92	L.V115	115.00	6	1.0214	117.46
109	STA RITA115	115.00	6	1.0262	118.02	123	MIR115	115.00	7	1.0036	115.41
154	CEMPAN15	115.00	6	1.0282	118.24	191	CHANG115	115.00	6	1.0131	116.51
522	TCATIVÁ 115	115.00	6	1.0300	118.45	529	TCOLON 115	115.00	6	1.0302	118.47

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
2	PAN115	115.00	6	0.9973	114.69	18	CAC115	115.00	6	0.9972	114.68
19	C.V115	115.00	6	0.9983	114.81	21	C.BAN115	115.00	6	0.9899	113.84
26	LOC115	115.00	6	0.9905	113.91	30	MAR115	115.00	6	0.9891	113.75
33	STM115	115.00	6	0.9956	114.49	37	SAN115	115.00	6	0.9895	113.79
48	TINAJ115	115.00	6	0.9952	114.45	50	M.O115	115.00	6	0.9953	114.46

AREA 6 [PANAMA] MACHINE SUMMARY:

BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
66	BLM13B	13.800	V2	31.0	0.7	25.0	0.0	0.9800	31.6	0.9997	47.0			1	6	
67	BLM13C	13.800	V3	31.0	0.7	25.0	0.0	0.9800	31.6	0.9997	47.0			1	6	
68	BLM13D	13.800	V4	31.0	0.6	25.0	0.0	0.9800	31.6	0.9998	47.0			1	6	
90	EST-13L	13.800	E1	22.0	-0.2	12.0	-5.0	0.9700	22.7	1.0000	27.0			1	6	
94	LV-13.8L	13.800	L1	24.0	0.1	12.0	-5.0	0.9700	24.7	1.0000	27.0			1	6	
97	FOR13A	13.800	F1	90.0	-37.4	50.0	-50.0	0.9710	100.4	0.9235	111.0			1	6	
98	FOR13B	13.800	F2	90.0	-37.4	50.0	-50.0	0.9710	100.4	0.9235	111.0			1	6	
99	FOR13C	13.800	F3	91.0	-37.3	50.0	-50.0	0.9710	101.3	0.9254	111.0			1	6	
101	BAY13A	13.800	B1	55.6	15.3	50.0	-25.0	1.0000	57.7	0.9641	96.0			1	6	SYST
102	BAY13B	13.800	B2	75.3	17.0	50.0	-25.0	1.0000	77.2	0.9754	96.0			1	6	
106	PANAM13A	13.800	M1	15.2	0.0	9.0	0.0	0.9803	15.5	1.0000	20.7			1	6	
106	PANAM13A	13.800	M2	15.2	0.0	9.0	0.0	0.9803	15.5	1.0000	20.7			1	6	
106	PANAM13A	13.800	M3	15.2	0.0	9.0	0.0	0.9803	15.5	1.0000	20.7			1	6	
108	BAY13C	13.800	B3	75.3	17.0	50.0	-25.0	1.0000	77.2	0.9754	100.0			1	6	
116	PACORA13	13.800	P1	17.5	0.0	8.8	0.0	1.0078	17.3	1.0000	21.7			1	6	
116	PACORA13	13.800	P2	17.5	0.0	8.8	0.0	1.0078	17.3	1.0000	21.7			1	6	
142	CANJ13A	13.800	C1	50.0	9.0	29.0	-29.0	0.9800	51.8	0.9841	69.0			1	6	
143	CANJ13B	13.800	C2	50.0	9.0	29.0	-29.0	0.9800	51.8	0.9841	69.0			1	6	
301	CONC13.8	13.800	G1	8.3	5.0	5.0	-5.0	0.9752	9.9	0.8566	13.5			1	6	
302	PASOANCH13.8	13.800	P1	3.5	2.0	2.0	-2.0	0.9734	4.1	0.8682	6.2			1	6	
304	ALGA13.8	13.800	A1	8.2	0.0	2.0	0.0	1.0973	7.5	1.0000	13.5			1	6	
317	MENDRE13.8	13.800	M1	9.0	0.0	0.0	0.0	1.0972	8.2	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C1	5.9	0.0	0.0	0.0	1.0973	5.4	1.0000	35.3			1	6	
324	POTRER 13.8	13.800	P1	2.6	0.0	2.0	0.0	0.9953	2.6	1.0000	6.2			1	6	
521	EGIRAL13.8	113.800	G1	3.6	1.3	2.8	1.3	1.0015	3.8	0.9407	4.8			1	6	
521	EGIRAL13.8	113.800	G2	3.6	1.3	2.8	1.3	1.0015	3.8	0.9407	4.8			1	6	
521	EGIRAL13.8	113.800	G3	3.6	1.3	2.8	1.3	1.0015	3.8	0.9407	4.8			1	6	
521	EGIRAL13.8	113.800	G4	3.6	1.3	2.8	1.3	1.0015	3.8	0.9407	4.8			1	6	
523	TCATIVÁ 13A	13.800	G1	8.3	1.4	6.6	-6.6	0.9900	8.5	0.9860	10.9			1	6	
523	TCATIVÁ 13A	13.800	G2	8.3	1.4	6.6	-6.6	0.9900	8.5	0.9860	10.9			1	6	
523	TCATIVÁ 13A	13.800	G3	8.3	1.4	6.6	-6.6	0.9900	8.5	0.9860	10.9			1	6	
523	TCATIVÁ 13A	13.800	G4	8.3	1.4	6.6	-6.6	0.9900	8.5	0.9860	10.9			1	6	
523	TCATIVÁ 13A	13.800	G5	8.3	1.4	6.6	-6.6	0.9900	8.5	0.9860	10.9			1	6	
524	TCATIVÁ 13B	13.800	10	8.3	1.4	6.6	-6.6	0.9900	8.5	0.9860	10.9			1	6	
524	TCATIVÁ 13B	13.800	G6	8.3	1.4	6.6	-6.6	0.9900	8.5	0.9860	10.9			1	6	
524	TCATIVÁ 13B	13.800	G7	8.3	1.4	6.6	-6.6	0.9900	8.5	0.9860	10.9			1	6	
524	TCATIVÁ 13B	13.800	G8	8.3	1.4	6.6	-6.6	0.9900	8.5	0.9860	10.9			1	6	
524	TCATIVÁ 13B	13.800	G9	8.3	1.4	6.6	-6.6	0.9900	8.5	0.9860	10.9			1	6	
525	TCOLON 13A	13.800	G1	40.0	19.3	19.3	19.3	1.0178	43.6	0.9009	44.4			1	6	
527	TCOLON 13C	13.800	V1	40.0	19.3	19.3	19.3	1.0178	43.6	0.9009	44.4			1	6	
531	EGIRAL13.8	213.800	G5	8.1	3.0	6.4	3.0	1.0025	8.6	0.9374	10.9			1	6	
531	EGIRAL13.8	213.800	G6	8.1	3.0	6.4	3.0	1.0025	8.6	0.9374	10.9			1	6	
531	EGIRAL13.8	213.800	G7	8.1	3.0	6.4	3.0	1.0025	8.6	0.9374	10.9			1	6	
531	EGIRAL13.8	213.800	G8	8.1	3.0	6.4	3.0	1.0025	8.6	0.9374	10.9			1	6	
SUBSYSTEM TOTALS				1043.5	34.0	653.6	-309.8				1434.8					

AREA 7 [ACANAL] MACHINE SUMMARY:

BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
129	MIR13D	13.800	G4	35.0	1.0	15.0	0.0	1.0000	35.0	0.9996	44.1			2	7	
130	MIR13F	13.800	G5	17.1	0.0	8.0	0.0	1.0103	16.9	1.0000	27.7			2	7	
140	GAT6A	6.9000	G1	1.9	-0.4	2.0	-2.0	1.0000	2.0	0.9834	4.1			2	7	
140	GAT6A	6.9000	G2	1.9	-0.4	2.0	-2.0	1.0000	2.0	0.9834	4.1			2	7	
140	GAT6A	6.9000	G3	1.9	-0.4	2.0	-2.0	1.0000	2.0	0.9834	4.1			2	7	
141	GAT6B	6.9000	G4	3.9	-1.1	3.0	-3.0	1.0000	4.0	0.9619	5.6			2	7	
141	GAT6B	6.9000	G5	3.9	-1.1	3.0	-3.0	1.0000	4.0	0.9619	6.2			2	7	
141	GAT6B	6.9000	G6	3.9	-1.1	3.0	-3.0	1.0000	4.0	0.9619	6.2			2	7	
170	MIR13G	13.800	M1	17.0	6.8	11.2	6.8	1.0247	17.9	0.9281	23.0			2	7	
171	MIR13H	13.800	M1	17.0	6.8	11.2	6.8	1.0338	17.7	0.9281	23.0			2	7	
171	MIR13H	13.800	M2	17.0	6.8	11.2	6.8	1.0338	17.7	0.9281	23.0			2	7	
SUBSYSTEM TOTALS				120.5	17.1	71.5	5.5				171.3					

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E FRI, DEC 04 2009 13:26
PLAN EXP-SIN CON C.A. JUNIO 2009
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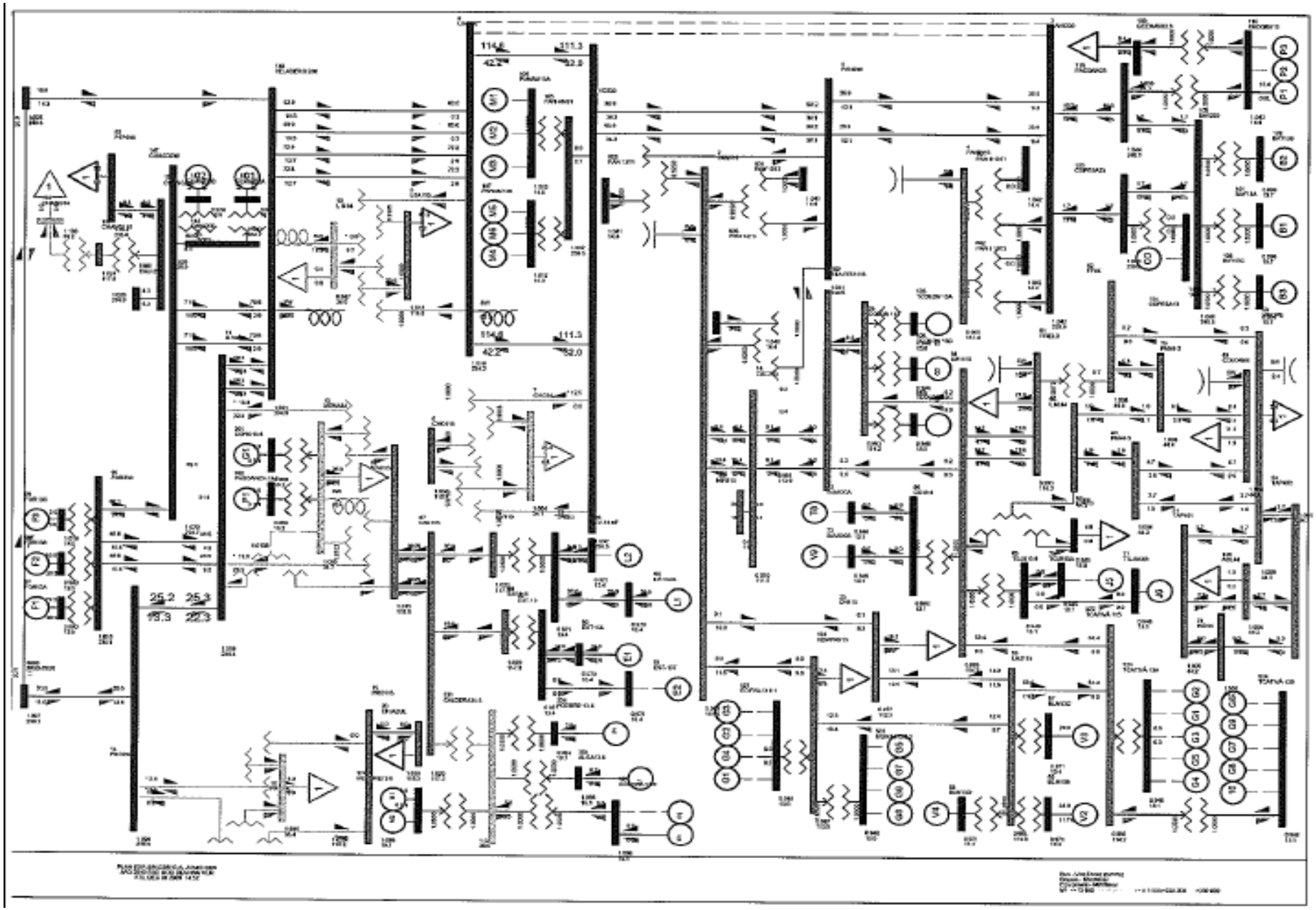
AREA TOTALS
IN MW/MVAR

X-- AREA --X	FROM GENERATION	TO LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
1	1347.4	1312.2	0.0	0.0	0.0	0.0	35.2	0.0
GUATEMAL	29.8	349.5	-266.2	0.0	412.9	17.9	341.4	
2	911.8	902.0	0.0	0.0	0.0	0.0	9.8	0.0
SALVADOR	100.8	182.3	-58.1	0.0	219.9	38.4	158.1	
3	1006.9	985.5	0.0	0.0	0.0	0.0	21.4	0.0
HONDURAS	55.7	290.6	-188.3	0.0	302.9	-5.3	261.6	
4	538.2	527.1	0.0	0.0	0.0	0.0	11.1	0.0
NICA	32.5	224.5	-98.9	0.0	143.2	-97.2	147.4	
5	1344.9	1324.8	0.0	0.0	0.0	0.8	19.3	0.0
C.RICA	254.0	569.4	-236.3	0.0	469.9	33.4	357.4	
6	1043.5	1088.6	0.0	0.0	0.0	-80.1	22.9	25.0
PANAMA	34.0	190.7	-23.4	0.0	447.1	18.4	293.3	
7	120.5	40.1	0.0	0.0	0.0	79.3	1.1	50.0
ACANAL	17.1	7.0	0.0	0.0	0.0	-5.5	15.6	
9	0.0	12.1	0.0	0.0	0.0	0.0	0.0	-75.0
COLON	0.0	2.1	0.0	0.0	0.0	0.0	0.0	
TOTALS	6313.3	6192.4	0.0	0.0	0.0	0.0	120.9	0.0
	523.8	1816.2	-871.1	0.0	1995.9	0.0	1574.7	

Demanda Mínima de Verano



PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E FRI, DEC 04 2009 13:30
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2010 ESC MOD DEM MIN VER

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
1	PAN230	230.00	6	1.0413	239.50	3	PANII230	230.00	6	1.0419	239.65
5	CHO230	230.00	6	1.0369	238.49	8	LSA230	230.00	6	1.0182	234.19
11	M.N230	230.00	6	1.0190	234.38	14	PRO230	230.00	6	1.0259	235.96
85	PTP230	230.00	6	1.0242	235.56	96	FOR230	230.00	6	1.0179	234.12
100	BAY230	230.00	6	1.0460	240.57	103	COPESA23	230.00	6	1.0431	239.91
105	PAN-AM23	230.00	6	1.0369	238.49	115	PACORA23	230.00	6	1.0440	240.12
144	CANJ230	230.00	6	1.0204	234.69	147	GUASQ230	230.00	6	1.0204	234.68
148	VELADERO 230	230.00	6	1.0213	234.89	190	CHANG230	230.00	6	1.0257	235.92
6000	FRONTER	230.00	6	1.0267	236.14						

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)

* NONE *

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E FRI, DEC 04 2009 13:30
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BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
6	CHO115	115.00	6	1.0373	119.28	9	LSA115	115.00	6	1.0132	116.52
12	M.N115	115.00	6	1.0154	116.77	15	PRO115	115.00	6	1.0276	118.18
20	CH.AZUL	115.00	6	1.0284	118.26	87	CAL115	115.00	6	1.0196	117.25
88	EST115	115.00	6	1.0201	117.32	92	L.V115	115.00	6	1.0198	117.27
191	CHANG115	115.00	6	1.0245	117.81						

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
2	PAN115	115.00	6	0.9693	111.47	4	PANII115	115.00	6	0.9687	111.40
18	CAC115	115.00	6	0.9696	111.50	19	C.V115	115.00	6	0.9662	111.11
21	C.BAN115	115.00	6	0.9662	111.12	23	CH115	115.00	6	0.9767	112.32
26	LOC115	115.00	6	0.9666	111.16	30	MAR115	115.00	6	0.9662	111.11
33	STM115	115.00	6	0.9686	111.39	37	SAN115	115.00	6	0.9658	111.06
48	TINAJ115	115.00	6	0.9688	111.41	50	M.O115	115.00	6	0.9688	111.41
52	TOC115	115.00	6	0.9678	111.29	54	LM1115	115.00	6	0.9931	114.21
55	LM2115	115.00	6	0.9937	114.28	61	FFIELD	115.00	6	0.9935	114.25
109	STA RITA115	115.00	6	0.9906	113.92	123	MIR115	115.00	7	0.9778	112.45
154	CEMPAN15	115.00	6	0.9866	113.46	522	TCATIVÁ 115	115.00	6	0.9934	114.24

529 TCOLON 115 115.00   6 0.9928 114.18

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E FRI, DEC 04 2009 13:30
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2010 ESC MOD DEM MIN VER

AREA 6 [PANAMA   ] MACHINE SUMMARY:

BUS#	X-- NAME	--X BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
66	BLM13B	13.800	V2	28.0	11.7	25.0	0.0	0.9710	31.2	0.9229	47.0			1	6	
67	BLM13C	13.800	V3	28.0	11.7	25.0	0.0	0.9710	31.2	0.9229	47.0			1	6	
68	BLM13D	13.800	V4	28.0	12.2	25.0	0.0	0.9710	31.5	0.9169	47.0			1	6	
90	EST-13L	13.800	E1	19.0	0.1	12.0	-5.0	0.9700	19.6	1.0000	27.0			1	6	
94	LV-13.8L	13.800	L1	20.0	0.3	12.0	-5.0	0.9700	20.6	0.9999	27.0			1	6	
97	FOR13A	13.800	F1	79.2	-30.3	50.0	-50.0	0.9800	86.6	0.9340	111.0			1	6	SYST
98	FOR13B	13.800	F2	83.5	-29.9	50.0	-50.0	0.9800	90.5	0.9413	111.0			1	6	
116	PACORA13	13.800	P1	17.4	0.0	8.8	0.0	1.0417	16.7	1.0000	21.7			1	6	
142	CANJ13A	13.800	C1	40.0	6.3	29.0	-29.0	0.9783	41.4	0.9879	69.0			1	6	
143	CANJ13B	13.800	C2	40.0	6.3	29.0	-29.0	0.9783	41.4	0.9879	69.0			1	6	
301	CONC13.8	13.800	G1	8.3	5.0	5.0	-5.0	0.9598	10.1	0.8566	13.5			1	6	
302	PASOANCH13.8	13.800	P1	3.5	2.0	2.0	-2.0	0.9580	4.2	0.8682	6.2			1	6	
304	ALGA13.8	13.800	A1	8.2	0.0	2.0	0.0	1.0957	7.5	1.0000	13.5			1	6	
317	MENDRE13.8	13.800	M1	9.0	0.0	0.0	0.0	1.0956	8.2	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C1	5.0	0.0	0.0	0.0	1.0957	4.6	1.0000	35.3			1	6	
324	POTRER 13.8	13.800	P1	2.6	0.0	2.0	0.0	0.9939	2.6	1.0000	6.2			1	6	
SUBSYSTEM TOTALS				419.7	-4.7	276.8	-175.0				686.9					

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E FRI, DEC 04 2009 13:30
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2010 ESC MOD DEM MIN VER

AREA 7 [ACANAL   ] MACHINE SUMMARY:

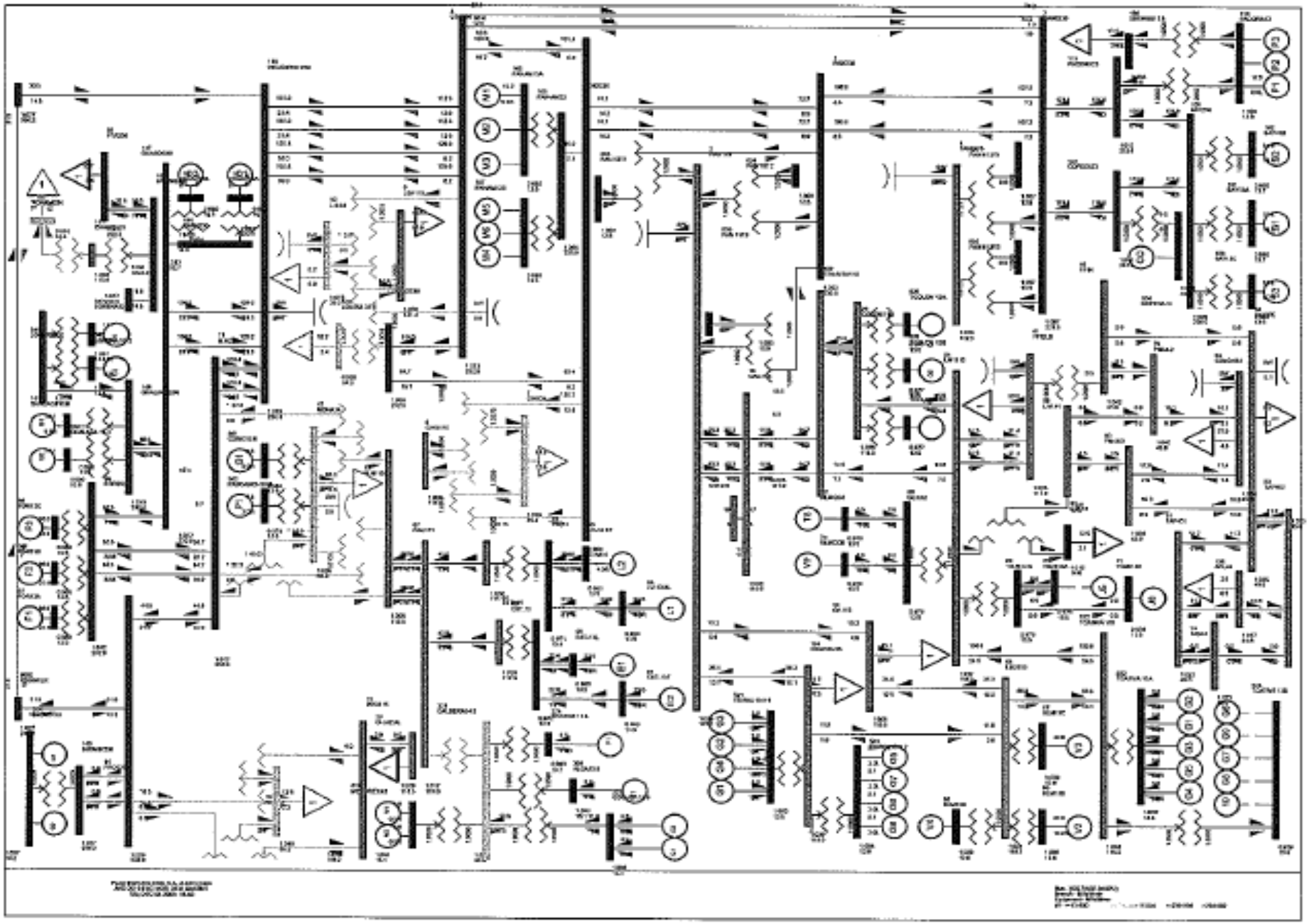
BUS#	X-- NAME	--X BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
170	MIR13G	13.800	M1	16.1	6.8	11.2	6.8	1.0147	17.2	0.9204	23.0			2	7	
171	MIR13H	13.800	M1	16.1	6.8	11.2	6.8	1.0240	17.0	0.9205	23.0			2	7	
171	MIR13H	13.800	M2	16.1	6.8	11.2	6.8	1.0240	17.0	0.9205	23.0			2	7	
SUBSYSTEM TOTALS				48.2	20.5	33.5	20.5				69.1					

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E FRI, DEC 04 2009 13:30
PLAN EXP-SIN CON C.A. JUNIO 2009
AREA TOTALS
AñO 2010 ESC MOD DEM MIN VER
IN MW/MVAR

X-- AREA	--X	FROM GENERATION	TO LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
1		1347.4	1312.2	0.0	0.0	0.0	0.0	35.2	0.0
GUATEMAL		29.8	349.5	-266.2	0.0	412.9	17.9	341.4	
2		911.8	902.0	0.0	0.0	0.0	0.0	9.8	0.0
SALVADOR		100.8	182.3	-58.1	0.0	219.9	38.4	158.1	

3	1006.9	985.5	0.0	0.0	0.0	0.0	21.4	0.0
HONDURAS	55.7	290.6	-188.3	0.0	302.8	-5.3	261.6	
4	538.2	527.1	0.0	0.0	0.0	0.0	11.1	0.0
NICA	32.6	224.5	-98.9	0.0	143.2	-97.2	147.4	
5	1344.9	1324.8	0.0	0.0	0.0	0.9	19.3	0.0
C.RICA	252.7	569.4	-236.7	0.0	469.7	32.4	357.2	
6	419.7	433.0	0.0	0.0	0.0	-32.9	14.7	25.0
PANAMA	-4.7	75.9	164.5	0.0	391.9	1.3	144.7	
7	48.2	16.0	0.0	0.0	0.0	32.0	0.2	50.0
ACANAL	20.5	2.8	0.0	0.0	0.0	12.6	5.1	
9	0.0	4.8	0.0	0.0	0.0	0.0	0.0	-75.0
COLON	0.0	0.8	0.0	0.0	0.0	0.0	0.0	
TOTALS	5617.1	5505.4	0.0	0.0	0.0	0.0	111.7	0.0
	487.2	1695.8	-683.6	0.0	1940.5	0.0	1415.4	

Demanda Máxima de Invierno



PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E FRI, DEC 04 2009 13:32
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2010 ESC MOD DEM MAX INV

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
1	PAN230	230.00	6	1.0033	230.77	3	PANII230	230.00	6	1.0071	231.64
5	CHO230	230.00	6	1.0043	230.99	8	LSA230	230.00	6	1.0127	232.91
11	M.N230	230.00	6	1.0168	233.86	14	PRO230	230.00	6	1.0261	236.01
85	PTP230	230.00	6	1.0104	232.40	96	FOR230	230.00	6	1.0121	232.79
100	BAY230	230.00	6	1.0260	235.97	103	COPESA23	230.00	6	1.0102	232.34
105	PAN-AM23	230.00	6	1.0043	230.99	115	PACORA23	230.00	6	1.0123	232.84
144	CANJ230	230.00	6	1.0123	232.83	145	BJOMIN230	230.00	6	1.0269	236.18
146	GUALACA230	230.00	6	1.0149	233.43	147	GUASQ230	230.00	6	1.0124	232.84
148	VELADERO 230	230.00	6	1.0188	234.33	190	CHANG230	230.00	6	1.0118	232.71
345	LORENA230	230.00	6	1.0167	233.85	511	LGUIAS230	230.00	6	1.0085	231.96
6000	FRONTER	230.00	6	1.0266	236.13						

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)

* NONE *

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E FRI, DEC 04 2009 13:32
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2010 ESC MOD DEM MAX INV

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
2	PAN115	115.00	6	1.0057	115.65	4	PANII115	115.00	6	1.0204	117.35
6	CHO115	115.00	6	1.0054	115.62	9	LSA115	115.00	6	1.0560	121.44
12	M.N115	115.00	6	1.0049	115.56	15	PRO115	115.00	6	1.0279	118.21
18	CAC115	115.00	6	1.0055	115.64	19	C.V115	115.00	6	1.0091	116.05
20	CH.AZUL	115.00	6	1.0287	118.30	23	CH115	115.00	6	1.0077	115.88
33	STM115	115.00	6	1.0040	115.46	48	TINAJ115	115.00	6	1.0037	115.42
50	M.O115	115.00	6	1.0038	115.44	52	TOC115	115.00	6	1.0181	117.08
54	LM1115	115.00	6	1.0275	118.16	55	LM2115	115.00	6	1.0285	118.28
61	FFIELD	115.00	6	1.0249	117.86	87	CAL115	115.00	6	1.0175	117.01
88	EST115	115.00	6	1.0200	117.30	92	L.V115	115.00	6	1.0184	117.12
109	STA RITA115	115.00	6	1.0252	117.90	123	MIR115	115.00	7	1.0120	116.38
154	CEMPAN15	115.00	6	1.0302	118.47	191	CHANG115	115.00	6	1.0081	115.93
522	TCATIVÁ 115	115.00	6	1.0281	118.23	529	TCOLON 115	115.00	6	1.0264	118.03

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
21	C.BAN115	115.00	6	0.9989	114.88	26	LOC115	115.00	6	0.9995	114.94
30	MAR115	115.00	6	0.9979	114.75	37	SAN115	115.00	6	0.9987	114.85

AREA 6 [PANAMA] MACHINE SUMMARY:

BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
66	BLM13B	13.800	V2	30.0	10.2	25.0	0.0	1.0000	31.7	0.9465	47.0			1	6	
67	BLM13C	13.800	V3	30.0	10.2	25.0	0.0	1.0000	31.7	0.9465	47.0			1	6	
68	BLM13D	13.800	V4	30.0	10.7	25.0	0.0	1.0000	31.8	0.9423	47.0			1	6	
90	EST-13L	13.800	E1	22.0	3.4	12.0	-5.0	0.9800	22.7	0.9882	27.0			1	6	
91	EST-13T	13.800	E2	22.0	3.4	12.0	-5.0	0.9800	22.7	0.9882	27.0			1	6	
94	LV-13.8L	13.800	L1	24.0	4.0	12.0	-5.0	0.9800	24.8	0.9864	27.0			1	6	
95	LV-13.8T	13.800	L2	24.0	4.0	12.0	-5.0	0.9800	24.8	0.9864	27.0			1	6	
97	FOR13A	13.800	F1	95.0	-23.6	50.0	-50.0	0.9800	99.9	0.9705	111.0			1	6	
98	FOR13B	13.800	F2	95.0	-23.6	50.0	-50.0	0.9800	99.9	0.9705	111.0			1	6	
99	FOR13C	13.800	F3	95.0	-23.6	50.0	-50.0	0.9800	99.9	0.9705	111.0			1	6	
101	BAY13A	13.800	B1	79.4	14.2	50.0	-25.0	0.9900	81.5	0.9845	96.0			1	6	SYST
102	BAY13B	13.800	B2	81.8	14.4	50.0	-25.0	0.9900	83.9	0.9848	96.0			1	6	
106	PANAM13A	13.800	M1	15.2	0.3	9.0	0.0	0.9800	15.5	0.9997	20.7			1	6	
108	BAY13C	13.800	B3	81.8	6.7	50.0	-25.0	0.9800	83.7	0.9967	100.0			1	6	
116	PACORA13	13.800	P1	17.5	0.0	8.8	0.0	1.0055	17.4	1.0000	21.7			1	6	
142	CANJ13A	13.800	C1	57.0	13.4	29.0	-29.0	0.9800	59.8	0.9733	69.0			1	6	
143	CANJ13B	13.800	C2	57.0	13.4	29.0	-29.0	0.9800	59.8	0.9733	69.0			1	6	
150	GUALACA 13-2	13.800	G2	14.1	-3.3	7.4	-7.4	1.0000	14.5	0.9729	14.8			1	6	
151	GUALACA13.8	13.800	G1	14.1	-5.8	7.4	-7.4	0.9900	15.4	0.9251	14.8			1	6	
301	CONC13.8	13.800	G1	9.5	5.0	5.0	-5.0	0.9804	11.0	0.8849	13.5			1	6	
302	PASOANCH13.8	13.800	P1	4.8	2.0	2.0	-2.0	0.9786	5.3	0.9216	6.2			1	6	
304	ALGA13.8	13.800	A1	9.2	0.0	2.0	0.0	1.0934	8.4	1.0000	13.5			1	6	
317	MENDRE13.8	13.800	M1	9.0	0.0	0.0	0.0	1.0927	8.2	1.0000	35.3			1	6	
317	MENDRE13.8	13.800	M2	9.0	0.0	0.0	0.0	1.0927	8.2	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C1	5.9	0.0	0.0	0.0	1.0931	5.4	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C2	5.9	0.0	0.0	0.0	1.0931	5.4	1.0000	35.3			1	6	
324	POTRER 13.8	13.800	P1	3.5	2.0	2.0	-2.0	0.9930	4.1	0.8682	6.2			1	6	
342	LORENA13.8	13.800	L1	16.1	-5.0	10.5	-5.0	1.0006	16.8	0.9547	19.9			1	6	
346	LORENA 13-2	13.800	L2	16.1	-5.0	10.5	-5.0	1.0006	16.8	0.9547	19.9			1	6	
521	EGIRAL13.8	113.800	G1	3.6	1.3	2.8	1.3	1.0034	3.8	0.9407	4.8			1	6	
521	EGIRAL13.8	113.800	G2	3.6	1.3	2.8	1.3	1.0034	3.8	0.9407	4.8			1	6	
521	EGIRAL13.8	113.800	G3	3.6	1.3	2.8	1.3	1.0034	3.8	0.9407	4.8			1	6	
521	EGIRAL13.8	113.800	G4	3.6	1.3	2.8	1.3	1.0034	3.8	0.9407	4.8			1	6	
523	TCATIVÁ 13A	13.800	G1	8.0	2.9	6.6	-6.6	1.0000	8.5	0.9417	10.9			1	6	
523	TCATIVÁ 13A	13.800	G2	8.0	2.9	6.6	-6.6	1.0000	8.5	0.9417	10.9			1	6	
523	TCATIVÁ 13A	13.800	G3	8.0	2.9	6.6	-6.6	1.0000	8.5	0.9417	10.9			1	6	
523	TCATIVÁ 13A	13.800	G4	8.0	2.9	6.6	-6.6	1.0000	8.5	0.9417	10.9			1	6	
523	TCATIVÁ 13A	13.800	G5	8.0	2.9	6.6	-6.6	1.0000	8.5	0.9417	10.9			1	6	
531	EGIRAL13.8	213.800	G5	8.1	3.0	6.4	3.0	1.0044	8.6	0.9374	10.9			1	6	
531	EGIRAL13.8	213.800	G6	8.1	3.0	6.4	3.0	1.0044	8.6	0.9374	10.9			1	6	
531	EGIRAL13.8	213.800	G7	8.1	3.0	6.4	3.0	1.0044	8.6	0.9374	10.9			1	6	
531	EGIRAL13.8	213.800	G8	8.1	3.0	6.4	3.0	1.0044	8.6	0.9374	10.9			1	6	
SUBSYSTEM TOTALS				1060.4	58.9	615.4	-352.4				1422.2					

PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2010 ESC MOD DEM MAX INV

AREA 7 [ACANAL] MACHINE SUMMARY:

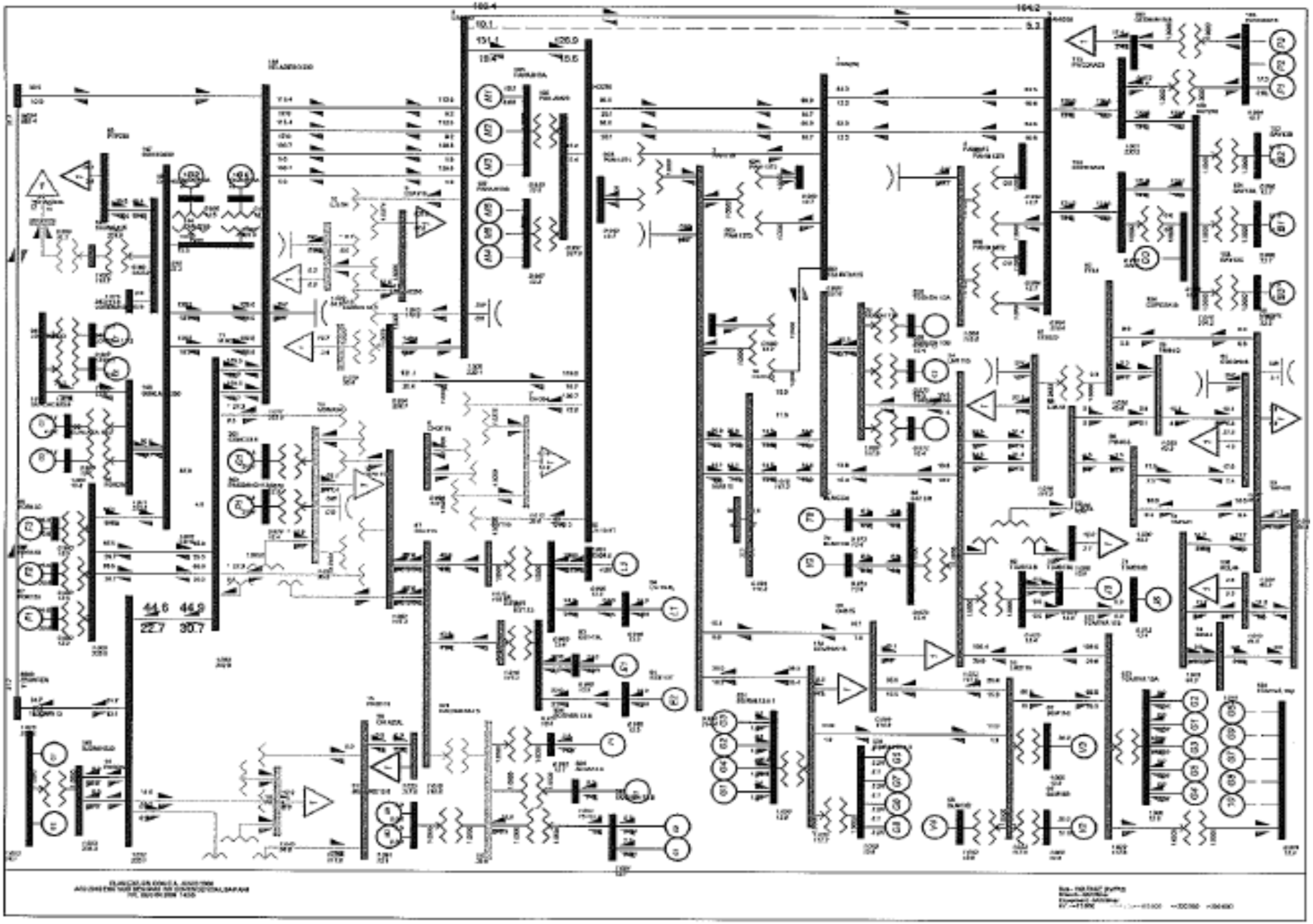
BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
129	MIR13D	13.800	G4	35.0	0.0	15.0	0.0	1.0072	34.8	1.0000	44.1			2	7	
130	MIR13F	13.800	G5	17.1	0.0	8.0	0.0	1.0201	16.8	1.0000	27.7			2	7	
140	GAT6A	6.9000	G1	1.9	-1.1	2.0	-2.0	1.0000	2.2	0.8783	4.1			2	7	
140	GAT6A	6.9000	G2	1.9	-1.1	2.0	-2.0	1.0000	2.2	0.8783	4.1			2	7	
140	GAT6A	6.9000	G3	1.9	-1.1	2.0	-2.0	1.0000	2.2	0.8783	4.1			2	7	
141	GAT6B	6.9000	G4	3.9	-1.8	3.0	-3.0	1.0000	4.3	0.9060	5.6			2	7	
141	GAT6B	6.9000	G5	3.9	-1.8	3.0	-3.0	1.0000	4.3	0.9060	6.2			2	7	
141	GAT6B	6.9000	G6	3.9	-1.8	3.0	-3.0	1.0000	4.3	0.9060	6.2			2	7	
170	MIR13G	13.800	M1	17.0	6.8	11.2	6.8	1.0344	17.7	0.9281	23.0			2	7	
171	MIR13H	13.800	M1	17.0	6.8	11.2	6.8	1.0435	17.6	0.9281	23.0			2	7	
171	MIR13H	13.800	M2	17.0	6.8	11.2	6.8	1.0435	17.6	0.9281	23.0			2	7	
SUBSYSTEM TOTALS				120.5	11.9	71.5	5.5				171.3					

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E FRI, DEC 04 2009 13:32
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2010 ESC MOD DEM MAX INV

AREA TOTALS
IN MW/MVAR

X-- AREA --X	FROM GENERATION	TO LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
1	1347.4	1312.2	0.0	0.0	0.0	0.0	35.2	0.0
GUATEMAL	29.8	349.5	-266.2	0.0	412.9	17.9	341.4	
2	911.8	902.0	0.0	0.0	0.0	0.0	9.8	0.0
SALVADOR	100.8	182.3	-58.1	0.0	219.9	38.4	158.1	
3	1006.9	985.5	0.0	0.0	0.0	0.0	21.4	0.0
HONDURAS	55.7	290.6	-188.3	0.0	302.8	-5.3	261.6	
4	538.2	527.1	0.0	0.0	0.0	0.0	11.1	0.0
NICA	32.7	224.5	-98.9	0.0	143.2	-97.1	147.4	
5	1344.9	1324.8	0.0	0.0	0.0	0.8	19.3	0.0
C.RICA	261.7	569.4	-237.2	0.0	469.1	41.5	357.1	
6	1060.4	1092.6	0.0	0.0	0.0	-80.6	36.4	25.0
PANAMA	58.9	191.4	-116.3	0.0	451.0	15.1	417.6	
7	120.5	39.6	0.0	0.0	0.0	79.7	1.2	50.0
ACANAL	11.9	6.9	0.0	0.0	0.0	-10.4	15.4	
9	0.0	12.0	0.0	0.0	0.0	0.0	0.0	-75.0
COLON	0.0	2.1	0.0	0.0	0.0	0.0	0.0	
TOTALS	6330.2	6195.6	0.0	0.0	0.0	0.0	134.5	0.0
	551.5	1816.7	-964.9	0.0	1998.9	0.0	1698.6	

Contingencia Llano Sánchez – Panamá II



PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E FRI, DEC 04 2009 11:49
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2010 ESC MOD DEM MAX INV CONTINGENCIA LSA-PANII

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
8	LSA230	230.00	6	1.0004	230.09	11	M.N230	230.00	6	1.0124	232.86
14	PRO230	230.00	6	1.0222	235.10	85	PTP230	230.00	6	1.0078	231.80
96	FOR230	230.00	6	1.0087	232.01	100	BAY230	230.00	6	1.0181	234.16
115	PACORA23	230.00	6	1.0007	230.17	144	CANJ230	230.00	6	1.0082	231.89
145	BJOMIN230	230.00	6	1.0229	235.27	146	GUALACA230	230.00	6	1.0109	232.51
147	GUASQ230	230.00	6	1.0082	231.89	148	VELADERO 230	230.00	6	1.0113	232.60
190	CHANG230	230.00	6	1.0095	232.19	345	LORENA230	230.00	6	1.0128	232.94
6000	FRONTER	230.00	6	1.0228	235.24						

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
1	PAN230	230.00	6	0.9905	227.81	3	PANII230	230.00	6	0.9941	228.65
5	CHO230	230.00	6	0.9908	227.88	103	COPESA23	230.00	6	0.9979	229.52
105	PAN-AM23	230.00	6	0.9908	227.89	511	LGUIAS230	230.00	6	0.9943	228.68

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E FRI, DEC 04 2009 11:50
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2010 ESC MOD DEM MAX INV CONTINGENCIA LSA-PANII

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
4	PANII115	115.00	6	1.0075	115.86	9	LSA115	115.00	6	1.0427	119.92
12	M.N115	115.00	6	1.0023	115.26	15	PRO115	115.00	6	1.0240	117.76
20	CH.AZUL	115.00	6	1.0247	117.84	52	TOC115	115.00	6	1.0051	115.59
54	LM1115	115.00	6	1.0217	117.49	55	LM2115	115.00	6	1.0227	117.61
61	FFIELD	115.00	6	1.0191	117.19	87	CAL115	115.00	6	1.0157	116.81
88	EST115	115.00	6	1.0184	117.12	92	L.V115	115.00	6	1.0168	116.93
109	STA RITA115	115.00	6	1.0188	117.16	123	MIR115	115.00	7	1.0013	115.15
154	CEMPAN15	115.00	6	1.0234	117.69	191	CHANG115	115.00	6	1.0058	115.67
522	TCATIVÁ 115	115.00	6	1.0223	117.57	529	TCOLON 115	115.00	6	1.0202	117.33

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
2	PAN115	115.00	6	0.9944	114.35	6	CHO115	115.00	6	0.9918	114.06
18	CAC115	115.00	6	0.9943	114.34	19	C.V115	115.00	6	0.9965	114.60
21	C.BAN115	115.00	6	0.9873	113.54	23	CH115	115.00	6	0.9986	114.84
26	LOC115	115.00	6	0.9879	113.61	30	MAR115	115.00	6	0.9864	113.44
33	STM115	115.00	6	0.9927	114.16	37	SAN115	115.00	6	0.9870	113.50
48	TINAJ115	115.00	6	0.9924	114.12	50	M.O115	115.00	6	0.9925	114.13

AREA 6 [PANAMA] MACHINE SUMMARY:

BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
66	BLM13B	13.800	V2	30.0	12.7	25.0	0.0	1.0000	32.6	0.9208	47.0			1	6	
67	BLM13C	13.800	V3	30.0	12.7	25.0	0.0	1.0000	32.6	0.9208	47.0			1	6	
68	BLM13D	13.800	V4	30.0	13.3	25.0	0.0	1.0000	32.8	0.9146	47.0			1	6	
90	EST-13L	13.800	E1	22.0	3.9	12.0	-5.0	0.9800	22.8	0.9850	27.0			1	6	
91	EST-13T	13.800	E2	22.0	3.9	12.0	-5.0	0.9800	22.8	0.9850	27.0			1	6	
94	LV-13.8L	13.800	L1	24.0	4.5	12.0	-5.0	0.9800	24.9	0.9830	27.0			1	6	
95	LV-13.8T	13.800	L2	24.0	4.5	12.0	-5.0	0.9800	24.9	0.9830	27.0			1	6	
97	FOR13A	13.800	F1	95.0	-20.6	50.0	-50.0	0.9800	99.2	0.9773	111.0			1	6	
98	FOR13B	13.800	F2	95.0	-20.6	50.0	-50.0	0.9800	99.2	0.9773	111.0			1	6	
99	FOR13C	13.800	F3	95.0	-20.6	50.0	-50.0	0.9800	99.2	0.9773	111.0			1	6	
101	BAY13A	13.800	B1	83.4	20.4	50.0	-25.0	0.9900	86.7	0.9713	96.0			1	6	SYST
102	BAY13B	13.800	B2	81.8	20.3	50.0	-25.0	0.9900	85.1	0.9707	96.0			1	6	
106	PANAM13A	13.800	M1	15.2	6.0	9.0	0.0	0.9800	16.7	0.9308	20.7			1	6	
108	BAY13C	13.800	B3	81.8	12.5	50.0	-25.0	0.9800	84.4	0.9886	100.0			1	6	
116	PACORA13	13.800	P1	17.5	0.0	8.8	0.0	0.9938	17.6	1.0000	21.7			1	6	
142	CANJ13A	13.800	C1	57.0	14.1	29.0	-29.0	0.9800	59.9	0.9707	69.0			1	6	
143	CANJ13B	13.800	C2	57.0	14.1	29.0	-29.0	0.9800	59.9	0.9707	69.0			1	6	
150	GUALACA 13-2	13.800	G2	14.1	-2.3	7.4	-7.4	1.0000	14.3	0.9865	14.8			1	6	
151	GUALACA13.8	13.800	G1	14.1	-4.8	7.4	-7.4	0.9900	15.0	0.9468	14.8			1	6	
301	CONC13.8	13.800	G1	9.5	5.0	5.0	-5.0	0.9761	11.0	0.8849	13.5			1	6	
302	PASOANCH13.8	13.800	P1	4.8	2.0	2.0	-2.0	0.9743	5.3	0.9216	6.2			1	6	
304	ALGA13.8	13.800	A1	9.2	0.0	2.0	0.0	1.0915	8.4	1.0000	13.5			1	6	
317	MENDRE13.8	13.800	M1	9.0	0.0	0.0	0.0	1.0908	8.3	1.0000	35.3			1	6	
317	MENDRE13.8	13.800	M2	9.0	0.0	0.0	0.0	1.0908	8.3	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C1	5.9	0.0	0.0	0.0	1.0912	5.4	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C2	5.9	0.0	0.0	0.0	1.0912	5.4	1.0000	35.3			1	6	
324	POTRER 13.8	13.800	P1	3.5	2.0	2.0	-2.0	0.9912	4.1	0.8682	6.2			1	6	
342	LORENA13.8	13.800	L1	16.1	-5.0	10.5	-5.0	0.9966	16.9	0.9547	19.9			1	6	
346	LORENA 13-2	13.800	L2	16.1	-3.9	10.5	-5.0	1.0000	16.5	0.9720	19.9			1	6	
521	EGIRAL13.8	113.800	G1	3.6	1.5	2.8	1.3	1.0000	3.9	0.9270	4.8			1	6	
521	EGIRAL13.8	113.800	G2	3.6	1.5	2.8	1.3	1.0000	3.9	0.9270	4.8			1	6	
521	EGIRAL13.8	113.800	G3	3.6	1.5	2.8	1.3	1.0000	3.9	0.9270	4.8			1	6	
521	EGIRAL13.8	113.800	G4	3.6	1.5	2.8	1.3	1.0000	3.9	0.9270	4.8			1	6	
523	TCATIVÁ 13A	13.800	G1	8.0	3.5	6.6	-6.6	1.0000	8.7	0.9143	10.9			1	6	
523	TCATIVÁ 13A	13.800	G2	8.0	3.5	6.6	-6.6	1.0000	8.7	0.9143	10.9			1	6	
523	TCATIVÁ 13A	13.800	G3	8.0	3.5	6.6	-6.6	1.0000	8.7	0.9143	10.9			1	6	
523	TCATIVÁ 13A	13.800	G4	8.0	3.5	6.6	-6.6	1.0000	8.7	0.9143	10.9			1	6	
523	TCATIVÁ 13A	13.800	G5	8.0	3.5	6.6	-6.6	1.0000	8.7	0.9143	10.9			1	6	
531	EGIRAL13.8	213.800	G5	8.1	3.2	6.4	3.0	1.0000	8.7	0.9284	10.9			1	6	
531	EGIRAL13.8	213.800	G6	8.1	3.2	6.4	3.0	1.0000	8.7	0.9284	10.9			1	6	
531	EGIRAL13.8	213.800	G7	8.1	3.2	6.4	3.0	1.0000	8.7	0.9284	10.9			1	6	
531	EGIRAL13.8	213.800	G8	8.1	3.2	6.4	3.0	1.0000	8.7	0.9284	10.9			1	6	
SUBSYSTEM TOTALS				1064.4	110.5	615.4	-352.4				1422.2					

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E FRI, DEC 04 2009 11:51
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2010 ESC MOD DEM MAX INV CONTINGENCIA LSA-PANII

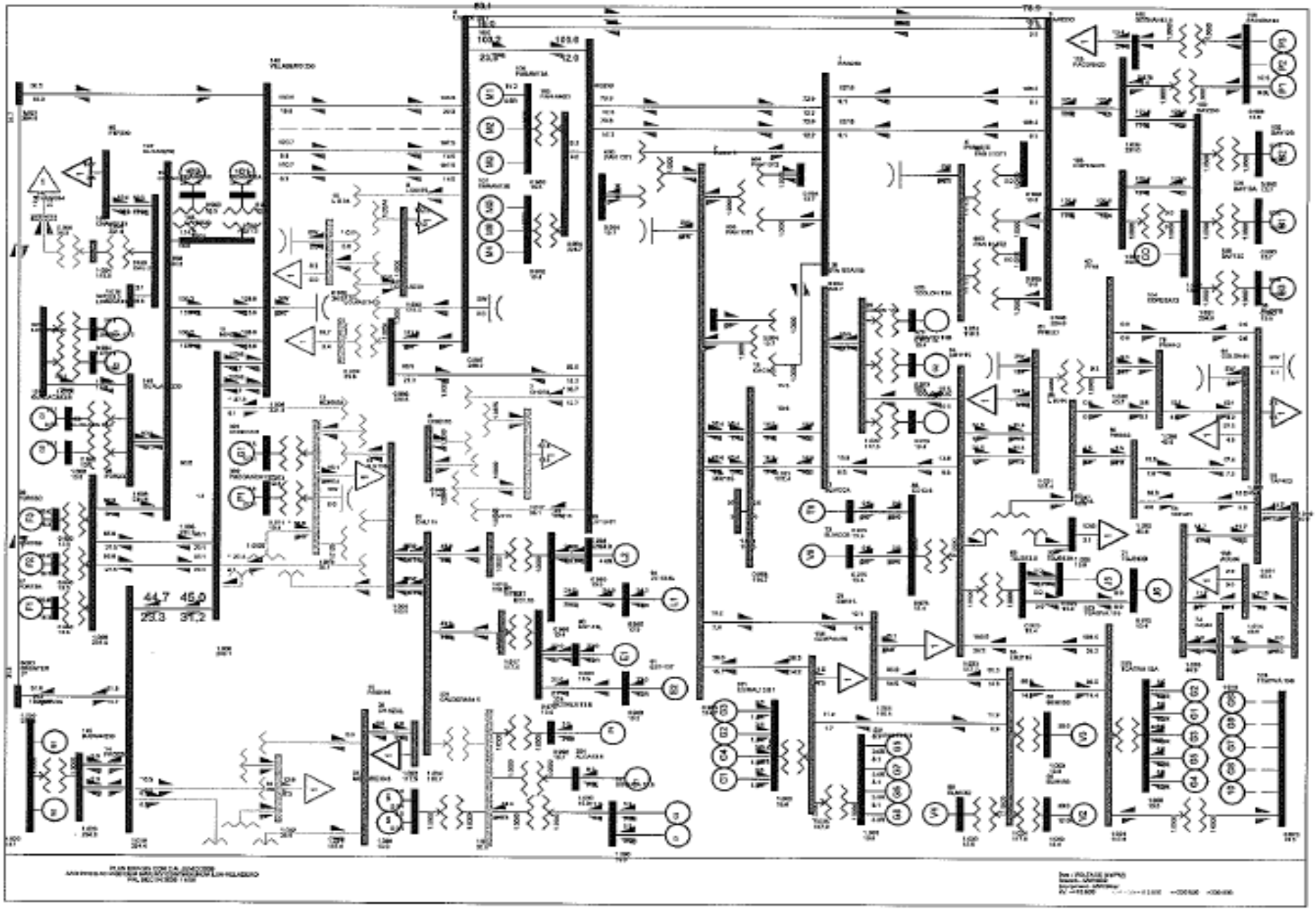
AREA 7 [ACANAL] MACHINE SUMMARY:

BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
129	MIR13D	13.800	G4	35.0	0.6	15.0	0.0	1.0000	35.0	0.9998	44.1			2	7	
130	MIR13F	13.800	G5	17.1	0.0	8.0	0.0	1.0112	16.9	1.0000	27.7			2	7	
140	GAT6A	6.9000	G1	1.9	-0.8	2.0	-2.0	1.0000	2.1	0.9214	4.1			2	7	
140	GAT6A	6.9000	G2	1.9	-0.8	2.0	-2.0	1.0000	2.1	0.9214	4.1			2	7	
140	GAT6A	6.9000	G3	1.9	-0.8	2.0	-2.0	1.0000	2.1	0.9214	4.1			2	7	
141	GAT6B	6.9000	G4	3.9	-1.6	3.0	-3.0	1.0000	4.2	0.9269	5.6			2	7	
141	GAT6B	6.9000	G5	3.9	-1.6	3.0	-3.0	1.0000	4.2	0.9269	6.2			2	7	
141	GAT6B	6.9000	G6	3.9	-1.6	3.0	-3.0	1.0000	4.2	0.9269	6.2			2	7	
170	MIR13G	13.800	M1	17.0	6.8	11.2	6.8	1.0256	17.9	0.9281	23.0			2	7	
171	MIR13H	13.800	M1	17.0	6.8	11.2	6.8	1.0347	17.7	0.9281	23.0			2	7	
171	MIR13H	13.800	M2	17.0	6.8	11.2	6.8	1.0347	17.7	0.9281	23.0			2	7	
SUBSYSTEM TOTALS				120.5	13.9	71.5	5.5				171.3					

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E FRI, DEC 04 2009 11:52
PLAN EXP-SIN CON C.A. JUNIO 2009 AREA TOTALS
AñO 2010 ESC MOD DEM MAX INV CONTINGENCIA LSA-PANII IN MW/MVAR

X-- AREA --X	FROM GENERATION	TO LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
1	1347.4	1312.2	0.0	0.0	0.0	0.0	35.2	0.0
GUATEMAL	29.8	349.5	-266.2	0.0	412.9	17.9	341.4	
2	911.8	902.0	0.0	0.0	0.0	0.0	9.8	0.0
SALVADOR	100.8	182.3	-58.1	0.0	219.9	38.4	158.1	
3	1006.9	985.5	0.0	0.0	0.0	0.0	21.4	0.0
HONDURAS	55.8	290.6	-188.3	0.0	302.8	-5.2	261.6	
4	538.2	527.1	0.0	0.0	0.0	0.0	11.1	0.0
NICA	32.8	224.5	-98.9	0.0	143.2	-97.0	147.4	
5	1344.9	1324.8	0.0	0.0	0.0	0.8	19.3	0.0
C.RICA	267.4	569.4	-236.9	0.0	468.5	46.0	357.4	
6	1064.4	1092.6	0.0	0.0	0.0	-80.5	40.4	25.0
PANAMA	110.5	191.4	-113.8	0.0	418.0	8.6	440.2	
7	120.5	39.6	0.0	0.0	0.0	79.7	1.3	50.0
ACANAL	13.9	6.9	0.0	0.0	0.0	-8.6	15.6	
9	0.0	12.0	0.0	0.0	0.0	0.0	0.0	-75.0
COLON	0.0	2.1	0.0	0.0	0.0	0.0	0.0	
TOTALS	6334.1	6195.6	0.0	0.0	0.0	0.0	138.5	0.0
	610.9	1816.7	-962.2	0.0	1965.3	0.0	1721.7	

Contingencia Veladero – Llano Sánchez



BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
11	M.N230	230.00	6	1.0091	232.10	14	PRO230	230.00	6	1.0192	234.41
85	PTP230	230.00	6	1.0059	231.35	96	FOR230	230.00	6	1.0062	231.42
100	BAY230	230.00	6	1.0207	234.76	103	COPESA23	230.00	6	1.0019	230.45
115	PACORA23	230.00	6	1.0046	231.05	144	CANJ230	230.00	6	1.0051	231.18
145	BJOMIN230	230.00	6	1.0199	234.59	146	GUALACA230	230.00	6	1.0079	231.82
147	GUASQ230	230.00	6	1.0051	231.18	148	VELADERO 230	230.00	6	1.0056	231.29
190	CHANG230	230.00	6	1.0078	231.79	345	LORENA230	230.00	6	1.0098	232.26
6000	FRONTER	230.00	6	1.0199	234.57						

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
1	PAN230	230.00	6	0.9945	228.73	3	PANII230	230.00	6	0.9984	229.63
5	CHO230	230.00	6	0.9943	228.68	8	LSA230	230.00	6	0.9967	229.24
105	PAN-AM23	230.00	6	0.9943	228.69	511	LGUIAS230	230.00	6	0.9949	228.82

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
4	PANII115	115.00	6	1.0117	116.35	9	LSA115	115.00	6	1.0388	119.46
12	M.N115	115.00	6	1.0003	115.04	15	PRO115	115.00	6	1.0210	117.41
19	C.V115	115.00	6	1.0005	115.06	20	CH.AZUL	115.00	6	1.0217	117.50
23	CH115	115.00	6	1.0013	115.15	52	TOC115	115.00	6	1.0093	116.07
54	LM1115	115.00	6	1.0233	117.68	55	LM2115	115.00	6	1.0243	117.80
61	FFIELD	115.00	6	1.0207	117.38	87	CAL115	115.00	6	1.0144	116.66
88	EST115	115.00	6	1.0172	116.98	92	L.V115	115.00	6	1.0155	116.78
109	STA RITA115	115.00	6	1.0207	117.37	123	MIR115	115.00	7	1.0044	115.51
154	CEMPAN15	115.00	6	1.0251	117.89	191	CHANG115	115.00	6	1.0041	115.47
522	TCATIVÁ 115	115.00	6	1.0239	117.75	529	TCOLON 115	115.00	6	1.0220	117.53

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
2	PAN115	115.00	6	0.9978	114.75	6	CHO115	115.00	6	0.9953	114.46
18	CAC115	115.00	6	0.9977	114.73	21	C.BAN115	115.00	6	0.9909	113.95
26	LOC115	115.00	6	0.9914	114.02	30	MAR115	115.00	6	0.9899	113.84
33	STM115	115.00	6	0.9961	114.56	37	SAN115	115.00	6	0.9905	113.91
48	TINAJ115	115.00	6	0.9958	114.51	50	M.O115	115.00	6	0.9959	114.53

AREA 6 [PANAMA] MACHINE SUMMARY:

BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
66	BLM13B	13.800	V2	30.0	12.0	25.0	0.0	1.0000	32.3	0.9284	47.0			1	6	
67	BLM13C	13.800	V3	30.0	12.0	25.0	0.0	1.0000	32.3	0.9284	47.0			1	6	
68	BLM13D	13.800	V4	30.0	12.5	25.0	0.0	1.0000	32.5	0.9228	47.0			1	6	
90	EST-13L	13.800	E1	22.0	4.2	12.0	-5.0	0.9800	22.9	0.9823	27.0			1	6	
91	EST-13T	13.800	E2	22.0	4.2	12.0	-5.0	0.9800	22.9	0.9823	27.0			1	6	
94	LV-13.8L	13.800	L1	24.0	4.8	12.0	-5.0	0.9800	25.0	0.9803	27.0			1	6	
95	LV-13.8T	13.800	L2	24.0	4.8	12.0	-5.0	0.9800	25.0	0.9803	27.0			1	6	
97	FOR13A	13.800	F1	95.0	-18.3	50.0	-50.0	0.9800	98.7	0.9820	111.0			1	6	
98	FOR13B	13.800	F2	95.0	-18.3	50.0	-50.0	0.9800	98.7	0.9820	111.0			1	6	
99	FOR13C	13.800	F3	95.0	-18.3	50.0	-50.0	0.9800	98.7	0.9820	111.0			1	6	
101	BAY13A	13.800	B1	82.0	18.4	50.0	-25.0	0.9900	84.9	0.9759	96.0			1	6	SYST
102	BAY13B	13.800	B2	81.8	18.3	50.0	-25.0	0.9900	84.7	0.9758	96.0			1	6	
106	PANAM13A	13.800	M1	15.2	4.5	9.0	0.0	0.9800	16.2	0.9585	20.7			1	6	
108	BAY13C	13.800	B3	81.8	10.6	50.0	-25.0	0.9800	84.2	0.9917	100.0			1	6	
116	PACORA13	13.800	P1	17.5	0.0	8.8	0.0	0.9976	17.5	1.0000	21.7			1	6	
142	CANJ13A	13.800	C1	57.0	14.6	29.0	-29.0	0.9800	60.0	0.9687	69.0			1	6	
143	CANJ13B	13.800	C2	57.0	14.6	29.0	-29.0	0.9800	60.0	0.9687	69.0			1	6	
150	GUALACA 13-2	13.800	G2	14.1	-1.6	7.4	-7.4	1.0000	14.1	0.9937	14.8			1	6	
151	GUALACA13.8	13.800	G1	14.1	-4.0	7.4	-7.4	0.9900	14.8	0.9612	14.8			1	6	
301	CONC13.8	13.800	G1	9.5	5.0	5.0	-5.0	0.9729	11.0	0.8849	13.5			1	6	
302	PASOANCH13.8	13.800	P1	4.8	2.0	2.0	-2.0	0.9710	5.3	0.9216	6.2			1	6	
304	ALGA13.8	13.800	A1	9.2	0.0	2.0	0.0	1.0901	8.4	1.0000	13.5			1	6	
317	MENDRE13.8	13.800	M1	9.0	0.0	0.0	0.0	1.0894	8.3	1.0000	35.3			1	6	
317	MENDRE13.8	13.800	M2	9.0	0.0	0.0	0.0	1.0894	8.3	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C1	5.9	0.0	0.0	0.0	1.0898	5.4	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C2	5.9	0.0	0.0	0.0	1.0898	5.4	1.0000	35.3			1	6	
324	POTRER 13.8	13.800	P1	3.5	2.0	2.0	-2.0	0.9899	4.1	0.8682	6.2			1	6	
342	LORENA13.8	13.800	L1	16.1	-5.0	10.5	-5.0	0.9936	16.9	0.9547	19.9			1	6	
346	LORENA 13-2	13.800	L2	16.1	-2.9	10.5	-5.0	1.0000	16.3	0.9842	19.9			1	6	
521	EGIRAL13.8	113.800	G1	3.6	1.4	2.8	1.3	1.0000	3.9	0.9346	4.8			1	6	
521	EGIRAL13.8	113.800	G2	3.6	1.4	2.8	1.3	1.0000	3.9	0.9346	4.8			1	6	
521	EGIRAL13.8	113.800	G3	3.6	1.4	2.8	1.3	1.0000	3.9	0.9346	4.8			1	6	
521	EGIRAL13.8	113.800	G4	3.6	1.4	2.8	1.3	1.0000	3.9	0.9346	4.8			1	6	
523	TCATIVÁ 13A	13.800	G1	8.0	3.3	6.6	-6.6	1.0000	8.7	0.9224	10.9			1	6	
523	TCATIVÁ 13A	13.800	G2	8.0	3.3	6.6	-6.6	1.0000	8.7	0.9224	10.9			1	6	
523	TCATIVÁ 13A	13.800	G3	8.0	3.3	6.6	-6.6	1.0000	8.7	0.9224	10.9			1	6	
523	TCATIVÁ 13A	13.800	G4	8.0	3.3	6.6	-6.6	1.0000	8.7	0.9224	10.9			1	6	
523	TCATIVÁ 13A	13.800	G5	8.0	3.3	6.6	-6.6	1.0000	8.7	0.9224	10.9			1	6	
531	EGIRAL13.8	213.800	G5	8.1	3.0	6.4	3.0	1.0000	8.6	0.9359	10.9			1	6	
531	EGIRAL13.8	213.800	G6	8.1	3.0	6.4	3.0	1.0000	8.6	0.9359	10.9			1	6	
531	EGIRAL13.8	213.800	G7	8.1	3.0	6.4	3.0	1.0000	8.6	0.9359	10.9			1	6	
531	EGIRAL13.8	213.800	G8	8.1	3.0	6.4	3.0	1.0000	8.6	0.9359	10.9			1	6	
SUBSYSTEM TOTALS				1063.0	110.7	615.4	-352.4				1422.2					

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E FRI, DEC 04 2009 11:58
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2010 ESC MOD DEM MAX INV CONTINGENCIA LSA-VELADERO

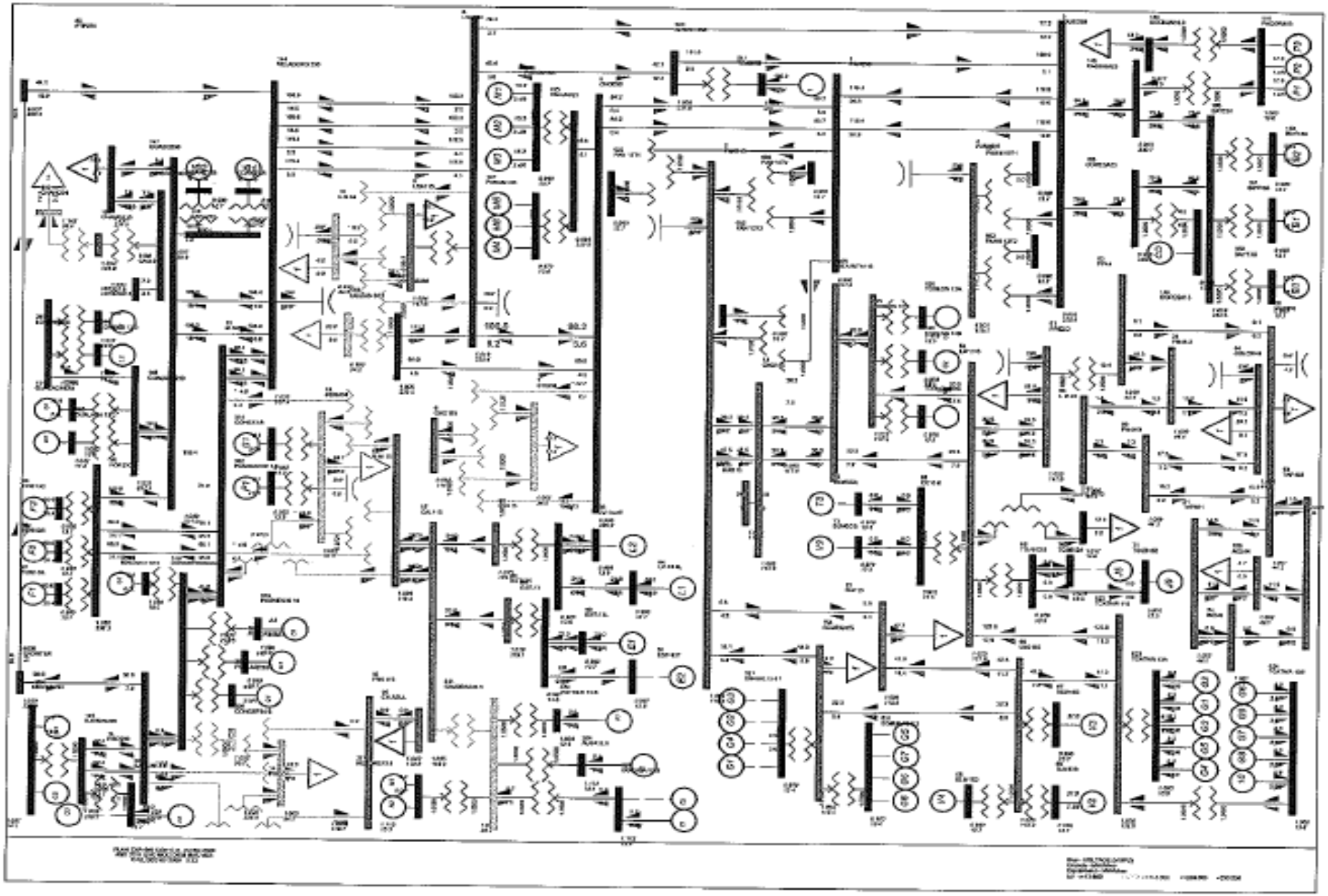
AREA 7 [ACANAL] MACHINE SUMMARY:

BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
129	MIR13D	13.800	G4	35.0	0.0	15.0	0.0	1.0005	35.0	1.0000	44.1			2	7	
130	MIR13F	13.800	G5	17.1	0.0	8.0	0.0	1.0133	16.9	1.0000	27.7			2	7	
140	GAT6A	6.9000	G1	1.9	-0.9	2.0	-2.0	1.0000	2.1	0.9108	4.1			2	7	
140	GAT6A	6.9000	G2	1.9	-0.9	2.0	-2.0	1.0000	2.1	0.9108	4.1			2	7	
140	GAT6A	6.9000	G3	1.9	-0.9	2.0	-2.0	1.0000	2.1	0.9108	4.1			2	7	
141	GAT6B	6.9000	G4	3.9	-1.6	3.0	-3.0	1.0000	4.2	0.9217	5.6			2	7	
141	GAT6B	6.9000	G5	3.9	-1.6	3.0	-3.0	1.0000	4.2	0.9217	6.2			2	7	
141	GAT6B	6.9000	G6	3.9	-1.6	3.0	-3.0	1.0000	4.2	0.9217	6.2			2	7	
170	MIR13G	13.800	M1	17.0	6.8	11.2	6.8	1.0277	17.8	0.9281	23.0			2	7	
171	MIR13H	13.800	M1	17.0	6.8	11.2	6.8	1.0367	17.7	0.9281	23.0			2	7	
171	MIR13H	13.800	M2	17.0	6.8	11.2	6.8	1.0367	17.7	0.9281	23.0			2	7	
SUBSYSTEM TOTALS				120.5	12.9	71.5	5.5				171.3					

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E FRI, DEC 04 2009 11:59
PLAN EXP-SIN CON C.A. JUNIO 2009 AREA TOTALS
AñO 2010 ESC MOD DEM MAX INV CONTINGENCIA LSA-VELADERO IN MW/MVAR

X-- AREA --X	FROM GENERATION	TO LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
1	1347.4	1312.2	0.0	0.0	0.0	0.0	35.2	0.0
GUATEMAL	29.8	349.5	-266.2	0.0	412.9	17.9	341.4	
2	911.8	902.0	0.0	0.0	0.0	0.0	9.8	0.0
SALVADOR	100.8	182.3	-58.1	0.0	219.9	38.4	158.1	
3	1006.9	985.5	0.0	0.0	0.0	0.0	21.4	0.0
HONDURAS	55.8	290.6	-188.3	0.0	302.8	-5.2	261.6	
4	538.2	527.1	0.0	0.0	0.0	0.0	11.1	0.0
NICA	32.9	224.5	-98.9	0.0	143.2	-96.9	147.4	
5	1344.9	1324.8	0.0	0.0	0.0	0.9	19.3	0.0
C.RICA	271.7	569.4	-236.7	0.0	468.0	49.5	357.6	
6	1063.0	1092.6	0.0	0.0	0.0	-80.6	39.0	25.0
PANAMA	110.7	191.4	-114.6	0.0	418.4	5.9	444.2	
7	120.5	39.6	0.0	0.0	0.0	79.7	1.3	50.0
ACANAL	12.9	6.9	0.0	0.0	0.0	-9.5	15.5	
9	0.0	12.0	0.0	0.0	0.0	0.0	0.0	-75.0
COLON	0.0	2.1	0.0	0.0	0.0	0.0	0.0	
TOTALS	6332.8	6195.6	0.0	0.0	0.0	0.0	137.1	0.0
	614.6	1816.7	-962.7	0.0	1965.2	0.0	1725.8	

Año 2011
Demanda Máxima de Verano



PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E WED, DEC 02 2009 14:55
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MAX VER

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
8	LSA230	230.00	6	1.0189	234.35	11	M.N230	230.00	6	1.0325	237.47
14	PRO230	230.00	6	1.0392	239.02	85	PTP230	230.00	6	1.0343	237.89
96	FOR230	230.00	6	1.0275	236.33	100	BAY230	230.00	6	1.0194	234.47
115	PACORA23	230.00	6	1.0029	230.66	144	CANJ230	230.00	6	1.0305	237.01
145	BJOMIN230	230.00	6	1.0394	239.07	146	GUALACA230	230.00	6	1.0315	237.26
147	GUASQ230	230.00	6	1.0304	237.00	148	VELADERO 230	230.00	6	1.0324	237.45
190	CHANG230	230.00	6	1.0374	238.59	310	CONCEPCION23	230.00	6	1.0381	238.76
345	LORENA230	230.00	6	1.0324	237.45	511	LGUIAS230	230.00	6	1.0088	232.03
540	ANTON 230	230.00	6	1.0078	231.79	6000	FRONTER	230.00	6	1.0390	238.97

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
1	PAN230	230.00	6	0.9896	227.61	3	PANII230	230.00	6	0.9952	228.90
5	CHO230	230.00	6	0.9963	229.15	103	COPESA23	230.00	6	0.9993	229.83
105	PAN-AM23	230.00	6	0.9964	229.16						

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E WED, DEC 02 2009 14:33
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MAX INV

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
3	PANII230	230.00	6	1.0003	230.07	11	M.N230	230.00	6	1.0139	233.19
14	PRO230	230.00	6	1.0265	236.09	85	PTP230	230.00	6	1.0135	233.10
96	FOR230	230.00	6	1.0138	233.17	100	BAY230	230.00	6	1.0178	234.10
103	COPESA23	230.00	6	1.0034	230.79	115	PACORA23	230.00	6	1.0051	231.17
144	CANJ230	230.00	6	1.0085	231.95	145	BJOMIN230	230.00	6	1.0285	236.56
146	GUALACA230	230.00	6	1.0119	232.74	147	GUASQ230	230.00	6	1.0083	231.91
190	CHANG230	230.00	6	1.0200	234.61	306	CHAN1 230	230.00	6	1.0193	234.45
310	CONCEPCION23	230.00	6	1.0236	235.42	341	PRUDENCIA230	230.00	6	1.0173	233.98
345	LORENA230	230.00	6	1.0154	233.54	6000	FRONTER	230.00	6	1.0258	235.93

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
1	PAN230	230.00	6	0.9921	228.18	5	CHO230	230.00	6	0.9845	226.43
8	LSA230	230.00	6	0.9814	225.73	105	PAN-AM23	230.00	6	0.9845	226.43
148	VELADERO 230	230.00	6	0.9975	229.42	511	LGUIAS230	230.00	6	0.9797	225.33
540	ANTON 230	230.00	6	0.9947	228.78						

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E WED, DEC 02 2009 14:56
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MAX VER

AREA 6 [PANAMA] MACHINE SUMMARY:

BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
66	BLM13B	13.800	V2	37.0	7.3	25.0	0.0	0.9900	38.1	0.9812	47.0			1	6	
67	BLM13C	13.800	V3	37.0	7.3	25.0	0.0	0.9900	38.1	0.9812	47.0			1	6	
68	BLM13D	13.800	V4	37.0	7.5	25.0	0.0	0.9900	38.1	0.9801	47.0			1	6	
90	EST-13L	13.800	E1	22.0	1.8	12.0	-5.0	0.9900	22.3	0.9966	27.0			1	6	
94	LV-13.8L	13.800	L1	24.0	2.1	12.0	-5.0	0.9900	24.3	0.9960	27.0			1	6	
97	FOR13A	13.800	F1	90.0	-29.4	50.0	-50.0	0.9900	95.6	0.9506	111.0			1	6	
98	FOR13B	13.800	F2	90.0	-29.4	50.0	-50.0	0.9900	95.6	0.9506	111.0			1	6	
99	FOR13C	13.800	F3	90.0	-29.4	50.0	-50.0	0.9900	95.6	0.9506	111.0			1	6	
101	BAY13A	13.800	B1	52.2	16.6	50.0	-25.0	0.9900	55.3	0.9529	96.0			1	6	SYST
102	BAY13B	13.800	B2	52.2	16.6	50.0	-25.0	0.9900	55.3	0.9529	96.0			1	6	
106	PANAM13A	13.800	M1	15.2	3.4	9.0	0.0	0.9900	15.7	0.9758	20.7			1	6	
106	PANAM13A	13.800	M2	15.2	3.4	9.0	0.0	0.9900	15.7	0.9758	20.7			1	6	
106	PANAM13A	13.800	M3	15.2	3.4	9.0	0.0	0.9900	15.7	0.9758	20.7			1	6	
108	BAY13C	13.800	B3	52.2	16.6	50.0	-25.0	0.9900	55.3	0.9529	100.0			1	6	
116	PACORA13	13.800	P1	17.5	1.4	8.8	0.0	1.0000	17.5	0.9967	21.7			1	6	
116	PACORA13	13.800	P2	17.5	1.4	8.8	0.0	1.0000	17.5	0.9967	21.7			1	6	
142	CANJ13A	13.800	C1	40.0	6.5	29.0	-29.0	0.9900	40.9	0.9870	69.0			1	6	
143	CANJ13B	13.800	C2	40.0	6.5	29.0	-29.0	0.9900	40.9	0.9870	69.0			1	6	
151	GUALACA13.8	13.800	G1	13.5	-7.4	7.4	-7.4	1.0004	15.4	0.8761	14.8			1	6	
204	BJOMIN13	13.800	G1	24.7	-13.0	13.0	-13.0	1.0211	27.3	0.8849	28.9			1	6	
205	BAITUN13.8	13.800	G1	40.0	1.1	26.6	-26.6	0.9900	40.4	0.9996	50.6			1	6	
301	CONC13.8	13.800	G1	8.1	5.0	5.0	-5.0	0.9570	9.9	0.8509	13.5			1	6	
302	PASOANCH13.8	13.800	P1	3.7	2.0	2.0	-2.0	0.9552	4.4	0.8797	6.2			1	6	
304	ALGA13.8	13.800	A1	8.1	0.0	2.0	0.0	1.1124	7.3	1.0000	13.5			1	6	
317	MENDRE13.8	13.800	M1	9.0	0.0	0.0	0.0	1.1122	8.1	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C1	5.7	0.0	0.0	0.0	1.1123	5.1	1.0000	35.3			1	6	
324	POTRER 13.8	13.800	P1	3.0	0.0	2.0	0.0	1.0090	3.0	1.0000	6.2			1	6	
340	PEDGALITO138	13.800	P1	17.5	2.4	12.0	-5.0	0.9900	17.8	0.9908	27.0			1	6	
342	LORENA13.8	13.800	L1	15.0	-5.0	10.5	-5.0	1.0167	15.6	0.9487	19.9			1	6	
350	MACANO 13.8	13.800	G1	3.0	0.0	2.0	0.0	1.0900	2.8	1.0000	6.2			1	6	
351	PERLAS N 13	13.800	G1	9.0	2.3	5.0	-5.0	0.9900	9.4	0.9700	13.5			1	6	
352	PERLAS S 13	13.800	G1	9.0	2.3	5.0	-5.0	0.9900	9.4	0.9700	13.5			1	6	
353	PORVEN N 13	13.800	G1	2.8	0.0	2.0	0.0	1.0900	2.6	1.0000	6.2			1	6	
523	TCATIVÁ 13A	13.800	G1	8.3	3.1	6.6	-6.6	1.0000	8.8	0.9349	10.9			1	6	
523	TCATIVÁ 13A	13.800	G2	8.3	3.1	6.6	-6.6	1.0000	8.8	0.9349	10.9			1	6	
523	TCATIVÁ 13A	13.800	G3	8.3	3.1	6.6	-6.6	1.0000	8.8	0.9349	10.9			1	6	
523	TCATIVÁ 13A	13.800	G4	8.3	3.1	6.6	-6.6	1.0000	8.8	0.9349	10.9			1	6	
523	TCATIVÁ 13A	13.800	G5	8.3	3.1	6.6	-6.6	1.0000	8.8	0.9349	10.9			1	6	
524	TCATIVÁ 13B	13.800	10	8.3	3.1	6.6	-6.6	1.0000	8.8	0.9349	10.9			1	6	
524	TCATIVÁ 13B	13.800	G6	8.3	3.1	6.6	-6.6	1.0000	8.8	0.9349	10.9			1	6	
524	TCATIVÁ 13B	13.800	G7	8.3	3.1	6.6	-6.6	1.0000	8.8	0.9349	10.9			1	6	
524	TCATIVÁ 13B	13.800	G8	8.3	3.1	6.6	-6.6	1.0000	8.8	0.9349	10.9			1	6	
524	TCATIVÁ 13B	13.800	G9	8.3	3.1	6.6	-6.6	1.0000	8.8	0.9349	10.9			1	6	
541	TOABRE	0.6000	1	120.0	1.7	1.7	1.7	1.0128	118.5	0.9999	166.7			1	6	
SUBSYSTEM TOTALS				1118.8	36.4	663.5	-430.9				1630.4					

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E WED, DEC 02 2009 14:56
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MAX VER

AREA 7 [ACANAL] MACHINE SUMMARY:

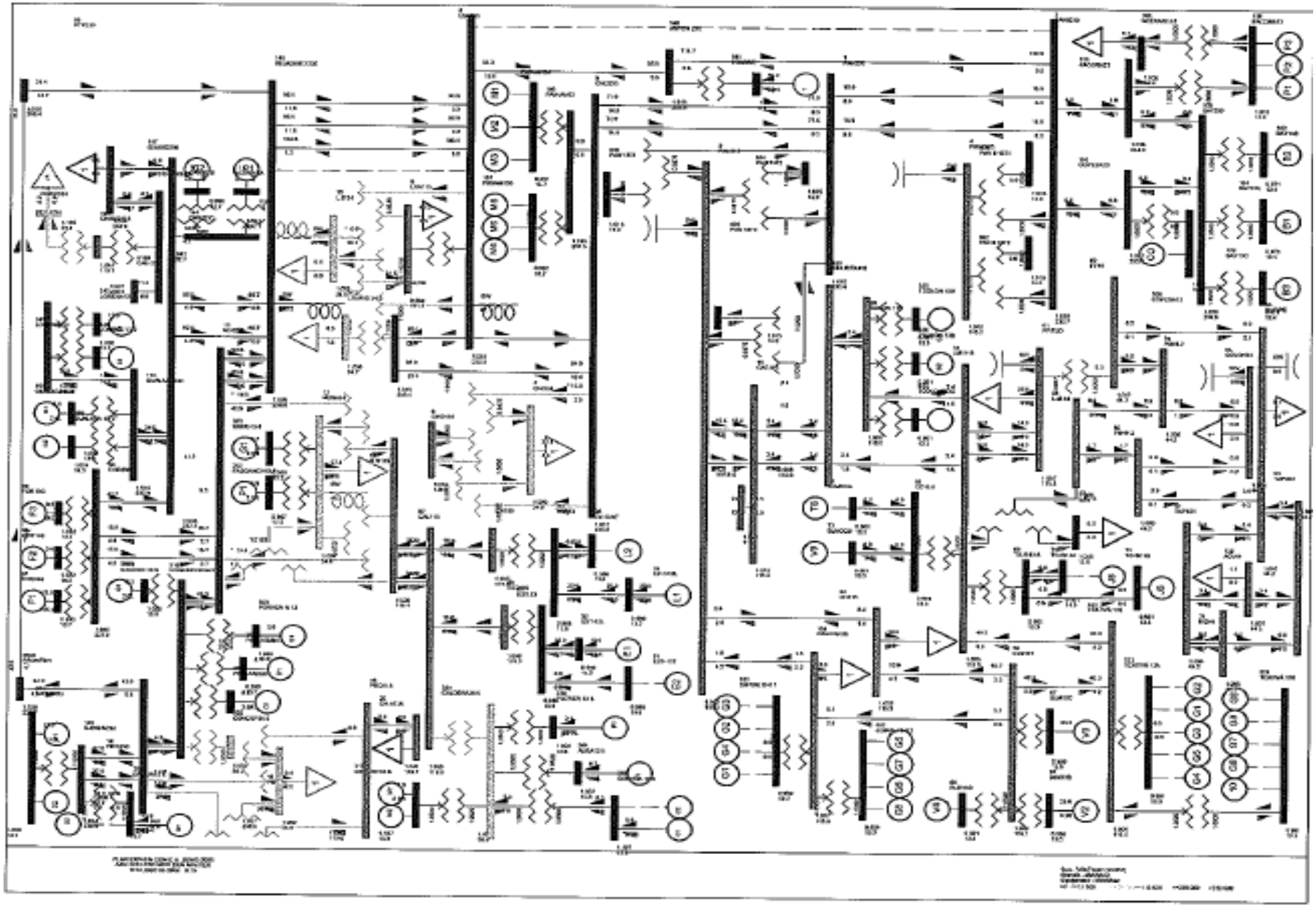
BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
129	MIR13D	13.800	G4	35.0	0.0	15.0	0.0	1.0007	35.0	1.0000	44.1			2	7	
130	MIR13F	13.800	G5	17.1	0.0	8.0	0.0	1.0134	16.9	1.0000	27.7			2	7	
140	GAT6A	6.9000	G1	1.9	-0.1	2.0	-2.0	1.0000	1.9	0.9971	4.1			2	7	
140	GAT6A	6.9000	G2	1.9	-0.1	2.0	-2.0	1.0000	1.9	0.9971	4.1			2	7	
140	GAT6A	6.9000	G3	1.9	-0.1	2.0	-2.0	1.0000	1.9	0.9971	4.1			2	7	
141	GAT6B	6.9000	G4	3.9	-0.9	3.0	-3.0	1.0000	4.0	0.9747	5.6			2	7	
141	GAT6B	6.9000	G5	3.9	-0.9	3.0	-3.0	1.0000	4.0	0.9747	6.2			2	7	
141	GAT6B	6.9000	G6	3.9	-0.9	3.0	-3.0	1.0000	4.0	0.9747	6.2			2	7	
170	MIR13G	13.800	M1	17.0	6.8	11.2	6.8	1.0278	17.8	0.9281	23.0			2	7	
171	MIR13H	13.800	M1	17.0	6.8	11.2	6.8	1.0369	17.7	0.9281	23.0			2	7	
171	MIR13H	13.800	M2	17.0	6.8	11.2	6.8	1.0369	17.7	0.9281	23.0			2	7	
SUBSYSTEM TOTALS				120.5	17.4	71.5	5.5				171.3					

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E WED, DEC 02 2009 14:57
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MAX VER

AREA TOTALS
IN MW/MVAR

X-- AREA --X	FROM GENERATION	TO LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
1	1347.4	1312.2	0.0	0.0	0.0	0.0	35.2	0.0
GUATEMAL	29.7	349.5	-266.2	0.0	412.9	17.9	341.4	
2	911.8	902.0	0.0	0.0	0.0	0.0	9.8	0.0
SALVADOR	100.8	182.3	-58.1	0.0	219.9	38.3	158.1	
3	1006.9	985.5	0.0	0.0	0.0	0.0	21.4	0.0
HONDURAS	55.6	290.6	-188.3	0.0	302.9	-5.4	261.6	
4	538.2	527.1	0.0	0.0	0.0	0.0	11.1	0.0
NICA	32.2	224.5	-98.9	0.0	143.3	-97.5	147.3	
5	1344.9	1324.8	0.0	0.0	0.0	0.8	19.3	0.0
C.RICA	234.8	569.4	-236.6	0.0	471.5	16.6	356.8	
6	1118.8	1154.0	0.0	0.0	0.0	-78.4	30.6	25.0
PANAMA	36.4	202.2	-53.3	0.0	484.8	35.0	335.3	
7	120.5	41.8	0.0	0.0	0.0	77.6	1.2	50.0
ACANAL	17.4	7.3	0.0	0.0	0.0	-4.9	15.0	
9	0.0	12.6	0.0	0.0	0.0	0.0	0.0	-75.0
COLON	0.0	2.2	0.0	0.0	0.0	0.0	0.0	
TOTALS	6388.6	6259.9	0.0	0.0	0.0	0.0	128.6	0.0
	506.8	1828.0	-901.4	0.0	2035.2	0.0	1615.5	

Demanda Mínima de Verano



PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E WED, DEC 02 2009 15:05
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MIN VER

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
1	PAN230	230.00	6	1.0147	233.38	3	PANII230	230.00	6	1.0161	233.70
5	CHO230	230.00	6	1.0154	233.53	8	LSA230	230.00	6	1.0110	232.54
11	M.N230	230.00	6	1.0317	237.30	14	PRO230	230.00	6	1.0383	238.80
85	PTP230	230.00	6	1.0388	238.92	96	FOR230	230.00	6	1.0324	237.46
100	BAY230	230.00	6	1.0197	234.54	103	COPESA23	230.00	6	1.0172	233.95
105	PAN-AM23	230.00	6	1.0154	233.53	115	PACORA23	230.00	6	1.0176	234.05
144	CANJ230	230.00	6	1.0334	237.69	145	BJOMIN230	230.00	6	1.0384	238.84
146	GUALACA230	230.00	6	1.0343	237.89	147	GUASQ230	230.00	6	1.0334	237.68
148	VELADERO 230	230.00	6	1.0263	236.05	190	CHANG230	230.00	6	1.0421	239.69
310	CONCEPCION23	230.00	6	1.0373	238.58	345	LORENA230	230.00	6	1.0350	238.04
511	LGUIAS230	230.00	6	1.0148	233.40	540	ANTON 230	230.00	6	1.0192	234.41
6000	FRONTER	230.00	6	1.0380	238.75						

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)

* NONE *

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E WED, DEC 02 2009 15:05
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MIN VER

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
2	PAN115	115.00	6	1.0025	115.29	4	PANII115	115.00	6	1.0018	115.21
6	CHO115	115.00	6	1.0157	116.81	12	M.N115	115.00	6	1.0299	118.44
15	PRO115	115.00	6	1.0402	119.62	18	CAC115	115.00	6	1.0025	115.29
20	CH.AZUL	115.00	6	1.0410	119.71	23	CH115	115.00	6	1.0025	115.29
33	STM115	115.00	6	1.0018	115.21	48	TINAJ115	115.00	6	1.0019	115.22
50	M.O115	115.00	6	1.0020	115.23	52	TOC115	115.00	6	1.0008	115.10
54	LM1115	115.00	6	1.0087	116.00	55	LM2115	115.00	6	1.0091	116.05
61	FFIELD	115.00	6	1.0069	115.79	87	CAL115	115.00	6	1.0347	118.99
88	EST115	115.00	6	1.0356	119.10	92	L.V115	115.00	6	1.0351	119.03
109	STA RITA115	115.00	6	1.0082	115.94	123	MIR115	115.00	7	1.0092	116.06
154	CEMPAN15	115.00	6	1.0072	115.83	191	CHANG115	115.00	6	1.0409	119.70
522	TCATIVÁ 115	115.00	6	1.0089	116.02	529	TCOLON 115	115.00	6	1.0086	115.99

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)

9	LSA115	115.00	6	0.9658	111.07	19	C.V115	115.00	6	0.9992	114.91
21	C.BAN115	115.00	6	0.9993	114.92	26	LOC115	115.00	6	0.9997	114.96
30	MAR115	115.00	6	0.9992	114.90	37	SAN115	115.00	6	0.9988	114.87

AREA 6 [PANAMA] MACHINE SUMMARY:

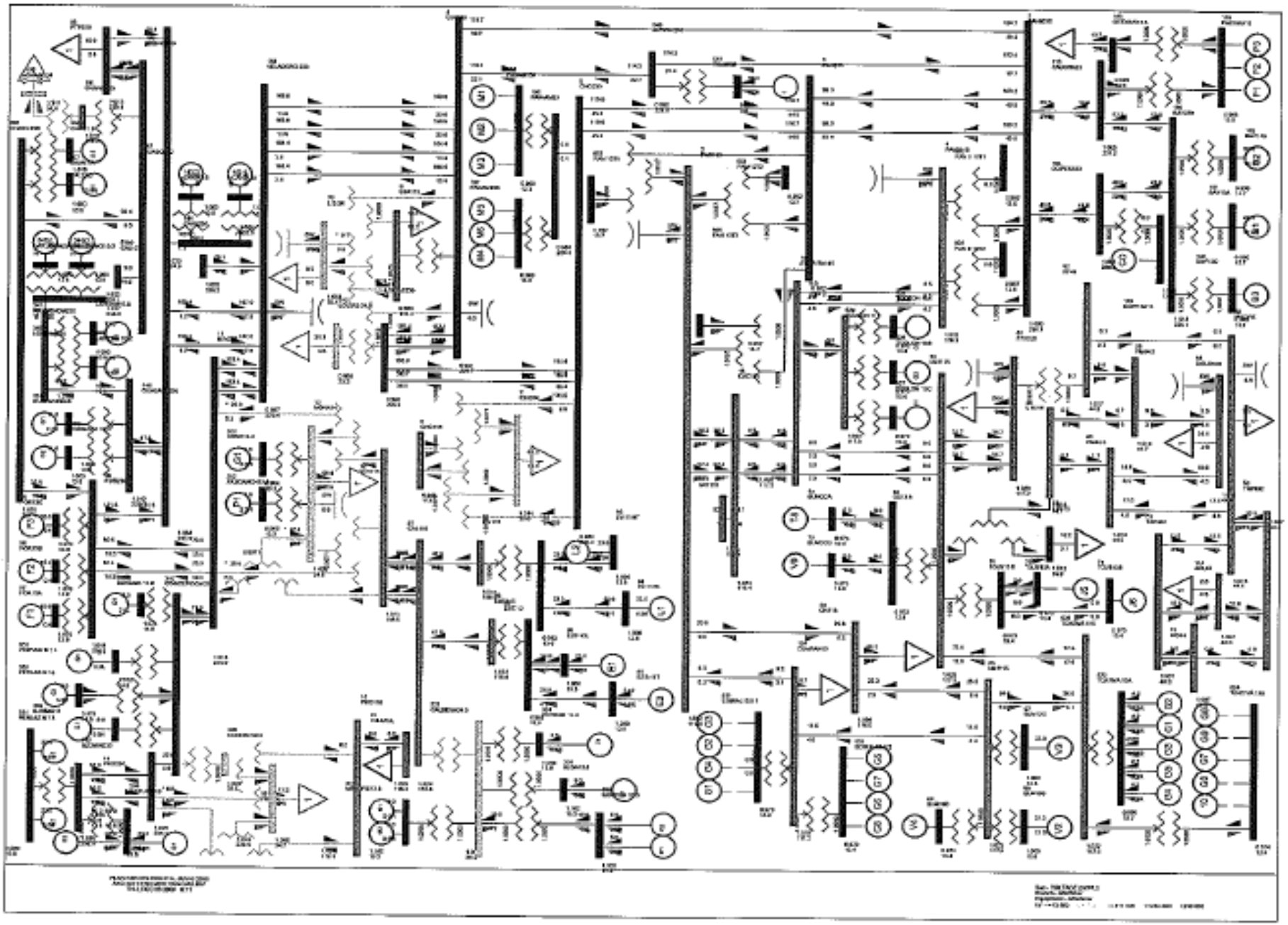
BUS#	X-- NAME	--X BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
66	BLM13B	13.800	V2	28.0	9.3	25.0	0.0	0.9800	30.1	0.9495	47.0			1	6	
67	BLM13C	13.800	V3	28.0	9.3	25.0	0.0	0.9800	30.1	0.9495	47.0			1	6	
90	EST-13L	13.800	E1	19.0	1.8	12.0	-5.0	0.9900	19.3	0.9958	27.0			1	6	
94	LV-13.8L	13.800	L1	20.0	2.0	12.0	-5.0	0.9900	20.3	0.9951	27.0			1	6	
97	FOR13A	13.800	F1	73.8	-35.2	50.0	-50.0	0.9900	82.6	0.9024	111.0			1	6	SYST
142	CANJ13A	13.800	C1	33.0	4.4	29.0	-29.0	0.9900	33.6	0.9913	69.0			1	6	
143	CANJ13B	13.800	C2	33.0	4.4	29.0	-29.0	0.9900	33.6	0.9913	69.0			1	6	
151	GUALACA13.8	13.800	G1	12.0	-7.4	7.4	-7.4	1.0036	14.1	0.8502	14.8			1	6	
204	BJOMIN13	13.800	G1	21.0	-13.0	13.0	-13.0	1.0202	24.2	0.8503	28.9			1	6	
205	BAITUN13.8	13.800	G1	33.0	1.5	26.6	-26.6	0.9900	33.4	0.9990	50.6			1	6	
301	CONC13.8	13.800	G1	8.7	5.0	5.0	-5.0	0.9589	10.5	0.8670	13.5			1	6	
302	PASOANCH13.8	13.800	P1	3.9	2.0	2.0	-2.0	0.9570	4.6	0.8884	6.2			1	6	
304	ALGA13.8	13.800	A1	8.7	0.0	2.0	0.0	1.1074	7.9	1.0000	13.5			1	6	
317	MENDRE13.8	13.800	M1	8.0	0.0	0.0	0.0	1.1073	7.2	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C1	5.0	0.0	0.0	0.0	1.1073	4.5	1.0000	35.3			1	6	
324	POTRER 13.8	13.800	P1	3.4	-2.0	2.0	-2.0	1.0032	3.9	0.8619	6.2			1	6	
340	PEDGALITO138	13.800	P1	18.7	2.7	12.0	-5.0	0.9900	19.1	0.9900	27.0			1	6	
342	LORENA13.8	13.800	L1	12.5	-5.0	10.5	-5.0	1.0196	13.2	0.9285	19.9			1	6	
350	MACANO 13.8	13.800	G1	3.3	-2.0	2.0	-2.0	1.0879	3.5	0.8521	6.2			1	6	
351	PERLAS N 13	13.800	G1	8.1	3.5	5.0	-5.0	0.9900	8.9	0.9183	13.5			1	6	
352	PERLAS S 13	13.800	G1	8.1	3.5	5.0	-5.0	0.9900	8.9	0.9183	13.5			1	6	
353	PORVEN N 13	13.800	G1	2.8	0.0	2.0	0.0	1.0892	2.6	1.0000	6.2			1	6	
541	TOABRE	0.6000	1	56.0	0.0	0.0	0.0	1.0214	54.8	1.0000	166.7			1	6	
SUBSYSTEM TOTALS				448.0	-15.5	276.5	-196.0				854.6					

AREA 7 [ACANAL] MACHINE SUMMARY:

BUS#	X-- NAME	--X BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
170	MIR13G	13.800	M1	16.1	6.8	11.2	6.8	1.0406	16.8	0.9204	23.0			2	7	
171	MIR13H	13.800	M1	16.1	6.8	11.2	6.8	1.0497	16.6	0.9205	23.0			2	7	
171	MIR13H	13.800	M2	16.1	6.8	11.2	6.8	1.0497	16.6	0.9204	23.0			2	7	
SUBSYSTEM TOTALS				48.2	20.5	33.5	20.5				69.1					

X-- AREA --X	FROM GENERATION	TO LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
1	1347.4	1312.2	0.0	0.0	0.0	0.0	35.2	0.0
GUATEMAL	29.7	349.5	-266.2	0.0	412.9	17.9	341.4	
2	911.8	902.0	0.0	0.0	0.0	0.0	9.8	0.0
SALVADOR	100.8	182.3	-58.1	0.0	219.9	38.3	158.1	
3	1006.9	985.5	0.0	0.0	0.0	0.0	21.4	0.0
HONDURAS	55.6	290.6	-188.3	0.0	302.9	-5.4	261.6	
4	538.2	527.1	0.0	0.0	0.0	0.0	11.1	0.0
NICA	32.2	224.5	-98.9	0.0	143.3	-97.5	147.3	
5	1344.9	1324.8	0.0	0.0	0.0	0.9	19.3	0.0
C.RICA	233.1	569.4	-236.4	0.0	471.5	14.8	356.9	
6	448.0	460.9	0.0	0.0	0.0	-32.2	14.1	25.0
PANAMA	-15.5	80.7	184.9	0.0	439.5	19.0	138.6	
7	48.2	16.7	0.0	0.0	0.0	31.3	0.2	50.0
ACANAL	20.5	2.9	0.0	0.0	0.0	12.9	4.6	
9	0.0	5.0	0.0	0.0	0.0	0.0	0.0	-75.0
COLON	0.0	0.9	0.0	0.0	0.0	0.0	0.0	
TOTALS	5645.4	5534.2	0.0	0.0	0.0	0.0	111.2	0.0
	456.4	1700.9	-663.0	0.0	1989.9	0.0	1408.5	

Demanda Máxima de Invierno



PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E WED, DEC 02 2009 14:33
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MAX INV

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
3	PANII230	230.00	6	1.0003	230.07	11	M.N230	230.00	6	1.0139	233.19
14	PRO230	230.00	6	1.0265	236.09	85	PTP230	230.00	6	1.0135	233.10
96	FOR230	230.00	6	1.0138	233.17	100	BAY230	230.00	6	1.0178	234.10
103	COPESA23	230.00	6	1.0034	230.79	115	PACORA23	230.00	6	1.0051	231.17
144	CANJ230	230.00	6	1.0085	231.95	145	BJOMIN230	230.00	6	1.0285	236.56
146	GUALACA230	230.00	6	1.0119	232.74	147	GUASQ230	230.00	6	1.0083	231.91
190	CHANG230	230.00	6	1.0200	234.61	306	CHAN1 230	230.00	6	1.0193	234.45
310	CONCEPCION23	230.00	6	1.0236	235.42	341	PRUDENCIA230	230.00	6	1.0173	233.98
345	LORENA230	230.00	6	1.0154	233.54	6000	FRONTER	230.00	6	1.0258	235.93

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
1	PAN230	230.00	6	0.9921	228.18	5	CHO230	230.00	6	0.9845	226.43
8	LSA230	230.00	6	0.9814	225.73	105	PAN-AM23	230.00	6	0.9845	226.43
148	VELADERO 230	230.00	6	0.9975	229.42	511	LGUIAS230	230.00	6	0.9797	225.33
540	ANTON 230	230.00	6	0.9947	228.78						

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E WED, DEC 02 2009 14:33
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MAX INV

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
2	PAN115	115.00	6	1.0123	116.41	4	PANII115	115.00	6	1.0115	116.32
12	M.N115	115.00	6	1.0133	116.52	15	PRO115	115.00	6	1.0283	118.25
18	CAC115	115.00	6	1.0119	116.37	19	C.V115	115.00	6	1.0043	115.50
20	CH.AZUL	115.00	6	1.0290	118.34	21	C.BAN115	115.00	6	1.0034	115.39
23	CH115	115.00	6	1.0089	116.03	26	LOC115	115.00	6	1.0044	115.50
30	MAR115	115.00	6	1.0034	115.39	33	STM115	115.00	6	1.0106	116.22
37	SAN115	115.00	6	1.0022	115.26	48	TINAJ115	115.00	6	1.0103	116.18
50	M.O115	115.00	6	1.0104	116.19	52	TOC115	115.00	6	1.0091	116.05
54	LM1115	115.00	6	1.0218	117.51	55	LM2115	115.00	6	1.0225	117.58
61	FFIELD	115.00	6	1.0195	117.25	87	CAL115	115.00	6	1.0295	118.39
88	EST115	115.00	6	1.0328	118.78	92	L.V115	115.00	6	1.0308	118.54
109	STA RITA115	115.00	6	1.0202	117.33	123	MIR115	115.00	7	1.0176	117.03
154	CEMPAN15	115.00	6	1.0187	117.15	191	CHANG115	115.00	6	1.0104	116.20
522	TCATIVÁ 115	115.00	6	1.0222	117.56	529	TCOLON 115	115.00	6	1.0203	117.33

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
6	CHO115	115.00	6	0.9856	113.34	9	LSA115	115.00	6	0.9862	113.42

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E WED, DEC 02 2009 14:32
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MAX INV

AREA 6 [PANAMA] MACHINE SUMMARY:

BUS#	X-- NAME	--X BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
66	BLM13B	13.800	V2	37.0	13.3	25.0	0.0	1.0000	39.3	0.9406	47.0			1	6	
67	BLM13C	13.800	V3	37.0	13.3	25.0	0.0	1.0000	39.3	0.9406	47.0			1	6	
90	EST-13L	13.800	E1	21.0	5.7	12.0	-5.0	1.0000	21.8	0.9648	27.0			1	6	
91	EST-13T	13.800	E2	21.0	5.7	12.0	-5.0	1.0000	21.8	0.9648	27.0			1	6	
94	LV-13.8L	13.800	L1	23.0	6.5	12.0	-5.0	1.0000	23.9	0.9627	27.0			1	6	
95	LV-13.8T	13.800	L2	23.0	6.5	12.0	-5.0	1.0000	23.9	0.9627	27.0			1	6	
97	FOR13A	13.800	F1	85.0	0.4	50.0	-50.0	1.0100	84.2	1.0000	111.0			1	6	
98	FOR13B	13.800	F2	85.0	0.4	50.0	-50.0	1.0100	84.2	1.0000	111.0			1	6	
99	FOR13C	13.800	F3	85.0	0.4	50.0	-50.0	1.0100	84.2	1.0000	111.0			1	6	
101	BAY13A	13.800	B1	44.4	17.3	50.0	-25.0	0.9900	48.1	0.9319	96.0			1	6	SYST
102	BAY13B	13.800	B2	58.0	18.2	50.0	-25.0	0.9900	61.4	0.9540	96.0			1	6	
142	CANJ13A	13.800	C1	46.0	13.4	29.0	-29.0	1.0000	47.9	0.9604	69.0			1	6	
143	CANJ13B	13.800	C2	46.0	13.4	29.0	-29.0	1.0000	47.9	0.9604	69.0			1	6	
150	GUALACA 13-2	13.800	G2	11.0	-2.7	7.4	-7.4	1.0000	11.3	0.9705	14.8			1	6	
151	GUALACA13.8	13.800	G1	11.0	-2.7	7.4	-7.4	1.0000	11.3	0.9705	14.8			1	6	
193	GEBONYIC	13.800	G1	9.0	-0.7	4.0	-4.0	1.0000	9.0	0.9966	35.3			1	6	
193	GEBONYIC	13.800	G2	9.0	-0.7	4.0	-4.0	1.0000	9.0	0.9966	35.3			1	6	
193	GEBONYIC	13.800	G3	9.0	-0.7	4.0	-4.0	1.0000	9.0	0.9966	35.3			1	6	
204	BJOMIN13	13.800	G1	22.0	-9.6	13.0	-13.0	1.0000	24.0	0.9171	28.9			1	6	
204	BJOMIN13	13.800	G2	22.0	-9.6	13.0	-13.0	1.0000	24.0	0.9171	28.9			1	6	
205	BAITUN13.8	13.800	G1	33.0	9.4	26.6	-26.6	1.0000	34.3	0.9616	50.6			1	6	
205	BAITUN13.8	13.800	G2	33.0	9.4	26.6	-26.6	1.0000	34.3	0.9616	50.6			1	6	
301	CONC13.8	13.800	G1	9.5	5.0	5.0	-5.0	0.9642	11.1	0.8849	13.5			1	6	
302	PASOANCH13.8	13.800	P1	4.8	2.0	2.0	-2.0	0.9623	5.4	0.9216	6.2			1	6	
304	ALGA13.8	13.800	A1	9.2	0.0	2.0	0.0	1.1024	8.3	1.0000	13.5			1	6	
307	CHAN1 A	13.800	G1	77.0	-15.6	50.0	-50.0	1.0000	78.6	0.9801	118.6			1	6	
317	MENDRE13.8	13.800	M1	9.0	0.0	0.0	0.0	1.1018	8.2	1.0000	35.3			1	6	
317	MENDRE13.8	13.800	M2	9.0	0.0	0.0	0.0	1.1018	8.2	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C1	5.0	0.0	0.0	0.0	1.1023	4.5	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C2	5.0	0.0	0.0	0.0	1.1023	4.5	1.0000	35.3			1	6	
324	POTRER 13.8	13.800	P1	3.5	0.1	2.0	-2.0	1.0000	3.5	0.9998	6.2			1	6	
340	PEDGALITO138	13.800	P1	20.0	8.5	12.0	-5.0	1.0000	21.7	0.9202	27.0			1	6	
342	LORENA13.8	13.800	L1	12.0	-4.9	10.5	-5.0	1.0000	13.0	0.9255	19.9			1	6	
343	PRUDENCIA138	13.800	G1	21.0	-9.1	9.8	-9.8	1.0000	22.9	0.9173	33.0			1	6	
344	PRUDENCI13-2	13.800	G2	21.0	-9.1	9.8	-9.8	1.0000	22.9	0.9173	33.0			1	6	
346	LORENA 13-2	13.800	L2	12.0	-4.9	10.5	-5.0	1.0000	13.0	0.9255	19.9			1	6	
350	MACANO 13.8	13.800	G1	3.3	-2.0	2.0	-2.0	1.0735	3.6	0.8522	6.2			1	6	
351	PERLAS N 13	13.800	G1	9.0	5.0	5.0	-5.0	0.9779	10.5	0.8742	13.5			1	6	
352	PERLAS S 13	13.800	G1	9.0	5.0	5.0	-5.0	0.9779	10.5	0.8742	13.5			1	6	
353	PORVEN N 13	13.800	G1	3.1	0.0	2.0	0.0	1.0748	2.9	1.0000	6.2			1	6	
523	TCATIVÁ 13A	13.800	G1	8.2	2.3	6.6	-6.6	0.9900	8.6	0.9627	10.9			1	6	
523	TCATIVÁ 13A	13.800	G2	8.2	2.3	6.6	-6.6	0.9900	8.6	0.9627	10.9			1	6	
523	TCATIVÁ 13A	13.800	G3	8.2	2.3	6.6	-6.6	0.9900	8.6	0.9627	10.9			1	6	
523	TCATIVÁ 13A	13.800	G4	8.2	2.3	6.6	-6.6	0.9900	8.6	0.9627	10.9			1	6	

523	TCATIVÁ 13A	13.800	G5	8.2	2.3	6.6	-6.6	0.9900	8.6	0.9627	10.9			1	6
541	TOABRE	0.6000	1	60.0	0.0	0.0	0.0	0.9972	60.2	1.0000	166.7			1	6
SUBSYSTEM TOTALS				1113.7	98.1	672.5	-522.4				1852.6				

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E WED, DEC 02 2009 14:32
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MAX INV

AREA 7 [ACANAL] MACHINE SUMMARY:

BUS#	X-- NAME	--X BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
129	MIR13D	13.800	G4	35.0	0.0	15.0	0.0	1.0102	34.6	1.0000	44.1			2	7	
130	MIR13F	13.800	G5	17.1	0.0	8.0	0.0	1.0232	16.7	1.0000	27.7			2	7	
140	GAT6A	6.9000	G1	1.9	-0.4	2.0	-2.0	1.0000	2.0	0.9755	4.1			2	7	
140	GAT6A	6.9000	G2	1.9	-0.4	2.0	-2.0	1.0000	2.0	0.9755	4.1			2	7	
140	GAT6A	6.9000	G3	1.9	-0.4	2.0	-2.0	1.0000	2.0	0.9755	4.1			2	7	
141	GAT6B	6.9000	G4	3.9	-1.2	3.0	-3.0	1.0000	4.0	0.9565	5.6			2	7	
141	GAT6B	6.9000	G5	3.9	-1.2	3.0	-3.0	1.0000	4.0	0.9565	6.2			2	7	
141	GAT6B	6.9000	G6	3.9	-1.2	3.0	-3.0	1.0000	4.0	0.9565	6.2			2	7	
170	MIR13G	13.800	M1	17.0	6.8	11.2	6.8	1.0375	17.7	0.9281	23.0			2	7	
171	MIR13H	13.800	M1	17.0	6.8	11.2	6.8	1.0465	17.5	0.9281	23.0			2	7	
171	MIR13H	13.800	M2	17.0	6.8	11.2	6.8	1.0465	17.5	0.9281	23.0			2	7	
SUBSYSTEM TOTALS				120.5	15.6	71.5	5.5				171.3					

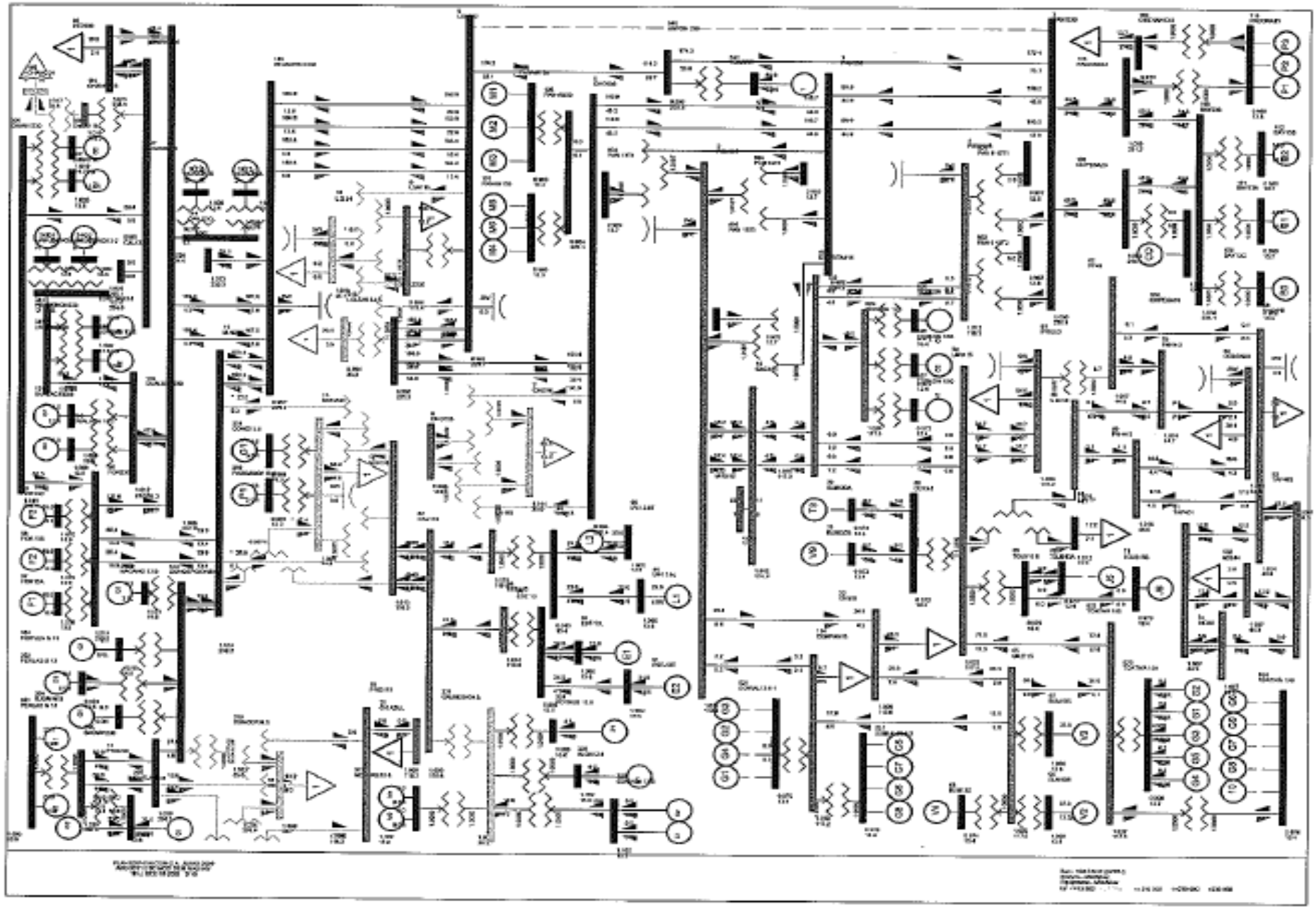
PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E WED, DEC 02 2009 15:01
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MAX INV

AREA TOTALS
IN MW/MVAR

X-- AREA	--X	FROM GENERATION	TO LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
1		1347.4	1312.2	0.0	0.0	0.0	0.0	35.2	0.0
GUATEMAL		29.8	349.5	-266.2	0.0	412.9	17.9	341.4	
2		911.8	902.0	0.0	0.0	0.0	0.0	9.8	0.0
SALVADOR		100.8	182.3	-58.1	0.0	219.9	38.4	158.1	
3		1006.9	985.5	0.0	0.0	0.0	0.0	21.4	0.0
HONDURAS		55.7	290.6	-188.3	0.0	302.8	-5.3	261.6	
4		538.2	527.1	0.0	0.0	0.0	0.0	11.1	0.0
NICA		32.7	224.5	-98.9	0.0	143.2	-97.1	147.4	
5		1344.9	1324.8	0.0	0.0	0.0	0.4	19.7	0.0
C.RICA		260.8	569.4	-237.4	0.0	476.3	45.9	359.3	
6		1113.7	1114.8	0.0	0.0	0.0	-79.3	66.0	25.0
PANAMA		98.1	195.3	-238.3	0.0	463.1	6.5	595.5	
7		120.5	40.4	0.0	0.0	0.0	78.9	1.3	50.0
ACANAL		15.6	7.1	0.0	0.0	0.0	-6.3	14.9	

9	0.0	12.2	0.0	0.0	0.0	0.0	0.0	-75.0
COLON	0.0	2.1	0.0	0.0	0.0	0.0	0.0	
TOTALS	6383.5	6218.9	0.0	0.0	0.0	0.0	164.6	0.0
	593.5	1820.8	-1087.1	0.0	2018.2	0.0	1878.1	

Contingencia Llano Sánchez – Panamá II



PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 7:40
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MAX INV CONT LSA-PANII

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
11	M.N230	230.00	6	1.0043	230.99	14	PRO230	230.00	6	1.0203	234.66
85	PTP230	230.00	6	1.0066	231.51	96	FOR230	230.00	6	1.0067	231.54
144	CANJ230	230.00	6	1.0002	230.06	145	BJOMIN230	230.00	6	1.0234	235.38
146	GUALACA230	230.00	6	1.0041	230.95	147	GUASQ230	230.00	6	1.0000	230.00
190	CHANG230	230.00	6	1.0159	233.66	306	CHAN1 230	230.00	6	1.0153	233.53
310	CONCEPCION23	230.00	6	1.0159	233.66	341	PRUDENCIA230	230.00	6	1.0104	232.39
345	LORENA230	230.00	6	1.0082	231.88	6000	FRONTER	230.00	6	1.0194	234.46

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
1	PAN230	230.00	6	0.9582	220.39	3	PANII230	230.00	6	0.9678	222.60
5	CHO230	230.00	6	0.9453	217.41	8	LSA230	230.00	6	0.9464	217.67
100	BAY230	230.00	6	0.9955	228.96	103	COPESA23	230.00	6	0.9725	223.66
105	PAN-AM23	230.00	6	0.9453	217.41	115	PACORA23	230.00	6	0.9754	224.33
148	VELADERO 230	230.00	6	0.9776	224.85	511	LGUIAS230	230.00	6	0.9383	215.80
540	ANTON 230	230.00	6	0.9553	219.71						

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 7:40
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MAX INV

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
12	M.N115	115.00	6	1.0081	115.93	15	PRO115	115.00	6	1.0221	117.54
20	CH.AZUL	115.00	6	1.0228	117.62	54	LM1115	115.00	6	1.0005	115.06
55	LM2115	115.00	6	1.0013	115.15	87	CAL115	115.00	6	1.0264	118.03
88	EST115	115.00	6	1.0300	118.46	92	L.V115	115.00	6	1.0278	118.20
191	CHANG115	115.00	6	1.0075	115.87	522	TCATIVÁ 115	115.00	6	1.0011	115.12

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
2	PAN115	115.00	6	0.9806	112.77	4	PANII115	115.00	6	0.9803	112.73
6	CHO115	115.00	6	0.9464	108.84	9	LSA115	115.00	6	0.9504	109.30
18	CAC115	115.00	6	0.9803	112.74	19	C.V115	115.00	6	0.9727	111.86
21	C.BAN115	115.00	6	0.9714	111.71	23	CH115	115.00	6	0.9814	112.86
26	LOC115	115.00	6	0.9724	111.83	30	MAR115	115.00	6	0.9715	111.72
33	STM115	115.00	6	0.9789	112.57	37	SAN115	115.00	6	0.9703	111.58
48	TINAJ115	115.00	6	0.9784	112.52	50	M.O115	115.00	6	0.9785	112.53
52	TOC115	115.00	6	0.9778	112.45	61	FFIELD	115.00	6	0.9983	114.81

109	STA RITA115	115.00	6	0.9969	114.64	123	MIR115	115.00	7	0.9881	113.64				
154	CEMPAN15	115.00	6	0.9945	114.36	529	TCOLON 115	115.00	6	0.9969	114.64				

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 7:40
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MAX INV CONT LSA-PANII

AREA 6 [PANAMA] MACHINE SUMMARY:

BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
66	BLM13B	13.800	V2	37.0	22.4	25.0	0.0	1.0000	43.3	0.8551	47.0			1	6	
67	BLM13C	13.800	V3	37.0	22.4	25.0	0.0	1.0000	43.3	0.8551	47.0			1	6	
90	EST-13L	13.800	E1	21.0	6.5	12.0	-5.0	1.0000	22.0	0.9548	27.0			1	6	
91	EST-13T	13.800	E2	21.0	6.5	12.0	-5.0	1.0000	22.0	0.9548	27.0			1	6	
94	LV-13.8L	13.800	L1	23.0	7.3	12.0	-5.0	1.0000	24.1	0.9526	27.0			1	6	
95	LV-13.8T	13.800	L2	23.0	7.3	12.0	-5.0	1.0000	24.1	0.9526	27.0			1	6	
97	FOR13A	13.800	F1	85.0	7.0	50.0	-50.0	1.0100	84.4	0.9967	111.0			1	6	
98	FOR13B	13.800	F2	85.0	7.0	50.0	-50.0	1.0100	84.4	0.9967	111.0			1	6	
99	FOR13C	13.800	F3	85.0	7.0	50.0	-50.0	1.0100	84.4	0.9967	111.0			1	6	
101	BAY13A	13.800	B1	57.9	34.8	50.0	-25.0	0.9900	68.2	0.8574	96.0			1	6	SYST
102	BAY13B	13.800	B2	58.0	34.8	50.0	-25.0	0.9900	68.3	0.8577	96.0			1	6	
142	CANJ13A	13.800	C1	46.0	14.7	29.0	-29.0	1.0000	48.3	0.9526	69.0			1	6	
143	CANJ13B	13.800	C2	46.0	14.7	29.0	-29.0	1.0000	48.3	0.9526	69.0			1	6	
150	GUALACA 13-2	13.800	G2	11.0	-0.8	7.4	-7.4	1.0000	11.0	0.9974	14.8			1	6	
151	GUALACA13.8	13.800	G1	11.0	-0.8	7.4	-7.4	1.0000	11.0	0.9974	14.8			1	6	
193	GEBONYIC	13.800	G1	9.0	-0.4	4.0	-4.0	1.0000	9.0	0.9988	35.3			1	6	
193	GEBONYIC	13.800	G2	9.0	-0.4	4.0	-4.0	1.0000	9.0	0.9988	35.3			1	6	
193	GEBONYIC	13.800	G3	9.0	-0.4	4.0	-4.0	1.0000	9.0	0.9988	35.3			1	6	
204	BJOMIN13	13.800	G1	22.0	-7.7	13.0	-13.0	1.0000	23.3	0.9436	28.9			1	6	
204	BJOMIN13	13.800	G2	22.0	-7.7	13.0	-13.0	1.0000	23.3	0.9436	28.9			1	6	
205	BAITUN13.8	13.800	G1	33.0	11.3	26.6	-26.6	1.0000	34.9	0.9457	50.6			1	6	
205	BAITUN13.8	13.800	G2	33.0	11.3	26.6	-26.6	1.0000	34.9	0.9457	50.6			1	6	
301	CONC13.8	13.800	G1	9.5	5.0	5.0	-5.0	0.9549	11.2	0.8849	13.5			1	6	
302	PASOANCH13.8	13.800	P1	4.8	2.0	2.0	-2.0	0.9531	5.4	0.9216	6.2			1	6	
304	ALGA13.8	13.800	A1	9.2	0.0	2.0	0.0	1.1017	8.4	1.0000	13.5			1	6	
307	CHAN1 A	13.800	G1	77.0	-11.7	50.0	-50.0	1.0000	77.9	0.9886	118.6			1	6	
317	MENDRE13.8	13.800	M1	9.0	0.0	0.0	0.0	1.1011	8.2	1.0000	35.3			1	6	
317	MENDRE13.8	13.800	M2	9.0	0.0	0.0	0.0	1.1011	8.2	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C1	5.0	0.0	0.0	0.0	1.1015	4.5	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C2	5.0	0.0	0.0	0.0	1.1015	4.5	1.0000	35.3			1	6	
324	POTRER 13.8	13.800	P1	3.5	1.2	2.0	-2.0	1.0000	3.7	0.9481	6.2			1	6	
340	PEDGALITO138	13.800	P1	20.0	10.3	12.0	-5.0	1.0000	22.5	0.8887	27.0			1	6	
342	LORENA13.8	13.800	L1	12.0	-2.5	10.5	-5.0	1.0000	12.3	0.9789	19.9			1	6	
343	PRUDENCIA138	13.800	G1	21.0	-5.3	9.8	-9.8	1.0000	21.7	0.9695	33.0			1	6	
344	PRUDENCI13-2	13.800	G2	21.0	-5.3	9.8	-9.8	1.0000	21.7	0.9695	33.0			1	6	
346	LORENA 13-2	13.800	L2	12.0	-2.5	10.5	-5.0	1.0000	12.3	0.9789	19.9			1	6	
350	MACANO 13.8	13.800	G1	3.3	-2.0	2.0	-2.0	1.0655	3.6	0.8522	6.2			1	6	
351	PERLAS N 13	13.800	G1	9.0	5.0	5.0	-5.0	0.9706	10.6	0.8742	13.5			1	6	
352	PERLAS S 13	13.800	G1	9.0	5.0	5.0	-5.0	0.9706	10.6	0.8742	13.5			1	6	
353	PORVEN N 13	13.800	G1	3.1	0.0	2.0	0.0	1.0667	2.9	1.0000	6.2			1	6	
523	TCATIVÁ 13A	13.800	G1	8.2	4.8	6.6	-6.6	0.9900	9.6	0.8634	10.9			1	6	
523	TCATIVÁ 13A	13.800	G2	8.2	4.8	6.6	-6.6	0.9900	9.6	0.8634	10.9			1	6	
523	TCATIVÁ 13A	13.800	G3	8.2	4.8	6.6	-6.6	0.9900	9.6	0.8634	10.9			1	6	
523	TCATIVÁ 13A	13.800	G4	8.2	4.8	6.6	-6.6	0.9900	9.6	0.8634	10.9			1	6	

523	TCATIVÁ 13A	13.800	G5	8.2	4.8	6.6	-6.6	0.9900	9.6	0.8634	10.9			1	6
541	TOABRE	0.6000	1	60.0	0.0	0.0	0.0	0.9578	62.6	1.0000	166.7			1	6
SUBSYSTEM TOTALS				1127.2	219.9	672.5	-522.4				1852.6				

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 7:40
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MAX INV CONT LSA-PANII

AREA 7 [ACANAL] MACHINE SUMMARY:

BUS#	X-- NAME	--X BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
129	MIR13D	13.800	G4	35.0	4.5	15.0	0.0	1.0000	35.3	0.9920	44.1			2	7	
130	MIR13F	13.800	G5	17.1	0.0	8.0	0.0	1.0016	17.1	1.0000	27.7			2	7	
140	GAT6A	6.9000	G1	1.9	0.3	2.0	-2.0	1.0000	2.0	0.9900	4.1			2	7	
140	GAT6A	6.9000	G2	1.9	0.3	2.0	-2.0	1.0000	2.0	0.9900	4.1			2	7	
140	GAT6A	6.9000	G3	1.9	0.3	2.0	-2.0	1.0000	2.0	0.9900	4.1			2	7	
141	GAT6B	6.9000	G4	3.9	-0.5	3.0	-3.0	1.0000	3.9	0.9931	5.6			2	7	
141	GAT6B	6.9000	G5	3.9	-0.5	3.0	-3.0	1.0000	3.9	0.9931	6.2			2	7	
141	GAT6B	6.9000	G6	3.9	-0.5	3.0	-3.0	1.0000	3.9	0.9931	6.2			2	7	
170	MIR13G	13.800	M1	17.0	6.8	11.2	6.8	1.0162	18.0	0.9281	23.0			2	7	
171	MIR13H	13.800	M1	17.0	6.8	11.2	6.8	1.0253	17.9	0.9281	23.0			2	7	
171	MIR13H	13.800	M2	17.0	6.8	11.2	6.8	1.0253	17.9	0.9281	23.0			2	7	
SUBSYSTEM TOTALS				120.5	24.4	71.5	5.5				171.3					

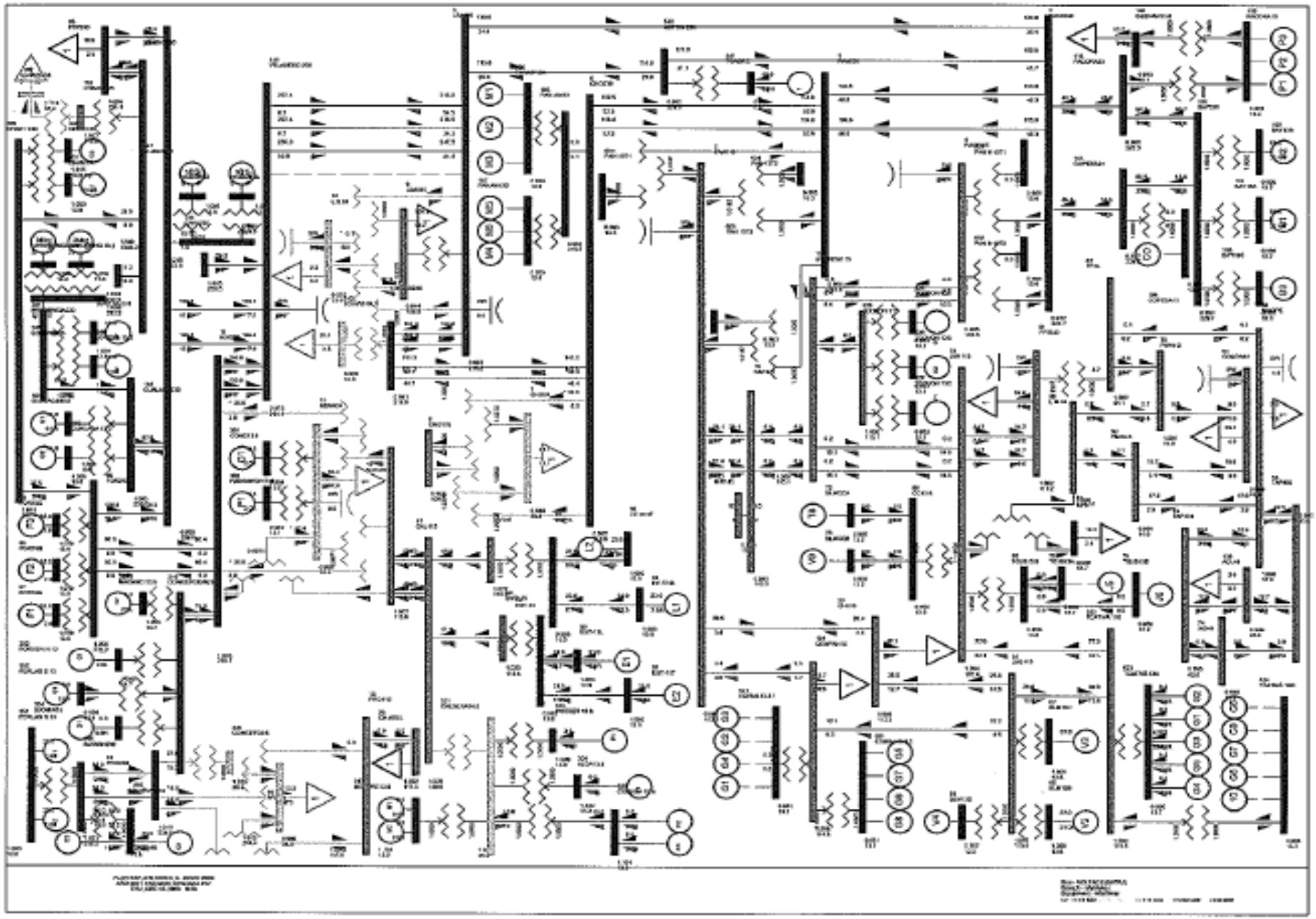
PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 7:43
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MAX INV CONT LSA-PANII

AREA TOTALS
IN MW/MVAR

X-- AREA	--X	FROM GENERATION	TO LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
1		1347.4	1312.2	0.0	0.0	0.0	0.0	35.2	0.0
GUATEMAL		29.8	349.5	-266.2	0.0	412.9	17.9	341.4	
2		911.8	902.0	0.0	0.0	0.0	0.0	9.8	0.0
SALVADOR		100.8	182.3	-58.1	0.0	219.9	38.4	158.1	
3		1006.9	985.5	0.0	0.0	0.0	0.0	21.4	0.0
HONDURAS		55.8	290.6	-188.3	0.0	302.8	-5.2	261.6	
4		538.2	527.1	0.0	0.0	0.0	0.0	11.1	0.0
NICA		33.0	224.5	-98.9	0.0	143.2	-96.8	147.4	
5		1344.9	1324.8	0.0	0.0	0.0	0.4	19.7	0.0
C.RICA		271.5	569.4	-236.9	0.0	475.1	54.3	359.9	
6		1127.2	1114.8	0.0	0.0	0.0	-79.2	79.5	25.0
PANAMA		219.9	195.3	-224.2	0.0	419.0	-10.2	675.9	
7		120.5	40.4	0.0	0.0	0.0	78.8	1.3	50.0
ACANAL		24.4	7.1	0.0	0.0	0.0	1.7	15.6	

9	0.0	12.2	0.0	0.0	0.0	0.0	0.0	-75.0
COLON	0.0	2.1	0.0	0.0	0.0	0.0	0.0	
TOTALS	6397.0	6218.9	0.0	0.0	0.0	0.0	178.1	0.0
	735.1	1820.8	-1072.6	0.0	1972.9	0.0	1959.8	

Contingencia Veladero – Llano Sánchez



PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 8:57
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MAX INV CONT VEL-LSA

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
11	M.N230	230.00	6	1.0031	230.71	14	PRO230	230.00	6	1.0195	234.48
85	PTP230	230.00	6	1.0057	231.31	96	FOR230	230.00	6	1.0058	231.33
145	BJOMIN230	230.00	6	1.0228	235.23	146	GUALACA230	230.00	6	1.0032	230.73
190	CHANG230	230.00	6	1.0154	233.54	306	CHAN1 230	230.00	6	1.0148	233.41
310	CONCEPCION23	230.00	6	1.0150	233.44	341	PRUDENCIA230	230.00	6	1.0095	232.18
345	LORENA230	230.00	6	1.0073	231.67	6000	FRONTER	230.00	6	1.0186	234.27

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
1	PAN230	230.00	6	0.9636	221.63	3	PANII230	230.00	6	0.9725	223.67
5	CHO230	230.00	6	0.9524	219.05	8	LSA230	230.00	6	0.9399	216.18
100	BAY230	230.00	6	0.9987	229.71	103	COPESA23	230.00	6	0.9769	224.68
105	PAN-AM23	230.00	6	0.9524	219.05	115	PACORA23	230.00	6	0.9796	225.31
144	CANJ230	230.00	6	0.9992	229.81	147	GUASQ230	230.00	6	0.9990	229.76
148	VELADERO 230	230.00	6	0.9751	224.28	511	LGUIAS230	230.00	6	0.9414	216.53
540	ANTON 230	230.00	6	0.9621	221.28						

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 8:57
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MAX INV CONT VEL-LSA

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
12	M.N115	115.00	6	1.0074	115.85	15	PRO115	115.00	6	1.0213	117.45
20	CH.AZUL	115.00	6	1.0220	117.53	54	LM1115	115.00	6	1.0038	115.43
55	LM2115	115.00	6	1.0046	115.52	61	FFIELD	115.00	6	1.0016	115.18
87	CAL115	115.00	6	1.0260	117.99	88	EST115	115.00	6	1.0297	118.41
92	L.V115	115.00	6	1.0274	118.15	109	STA RITA115	115.00	6	1.0004	115.05
191	CHANG115	115.00	6	1.0072	115.83	522	TCATIVÁ 115	115.00	6	1.0043	115.50
529	TCOLON 115	115.00	6	1.0005	115.05						

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
2	PAN115	115.00	6	0.9854	113.32	4	PANII115	115.00	6	0.9849	113.27
6	CHO115	115.00	6	0.9535	109.65	9	LSA115	115.00	6	0.9438	108.54
18	CAC115	115.00	6	0.9852	113.29	19	C.V115	115.00	6	0.9774	112.41
21	C.BAN115	115.00	6	0.9763	112.27	23	CH115	115.00	6	0.9856	113.34
26	LOC115	115.00	6	0.9773	112.39	30	MAR115	115.00	6	0.9764	112.28
33	STM115	115.00	6	0.9837	113.13	37	SAN115	115.00	6	0.9751	112.14

48	TINAJ115	115.00	6	0.9833	113.08	50	M.O115	115.00	6	0.9834	113.09
52	TOC115	115.00	6	0.9825	112.98	123	MIR115	115.00	7	0.9925	114.14
154	CEMPAN15	115.00	6	0.9982	114.79						

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 8:57
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MAX INV CONT VEL-LSA

AREA 6 [PANAMA] MACHINE SUMMARY:

BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
66	BLM13B	13.800	V2	37.0	21.0	25.0	0.0	1.0000	42.6	0.8693	47.0			1	6	
67	BLM13C	13.800	V3	37.0	21.0	25.0	0.0	1.0000	42.6	0.8693	47.0			1	6	
90	EST-13L	13.800	E1	21.0	6.6	12.0	-5.0	1.0000	22.0	0.9535	27.0			1	6	
91	EST-13T	13.800	E2	21.0	6.6	12.0	-5.0	1.0000	22.0	0.9535	27.0			1	6	
94	LV-13.8L	13.800	L1	23.0	7.5	12.0	-5.0	1.0000	24.2	0.9513	27.0			1	6	
95	LV-13.8T	13.800	L2	23.0	7.5	12.0	-5.0	1.0000	24.2	0.9513	27.0			1	6	
97	FOR13A	13.800	F1	85.0	7.8	50.0	-50.0	1.0100	84.5	0.9958	111.0			1	6	
98	FOR13B	13.800	F2	85.0	7.8	50.0	-50.0	1.0100	84.5	0.9958	111.0			1	6	
99	FOR13C	13.800	F3	85.0	7.8	50.0	-50.0	1.0100	84.5	0.9958	111.0			1	6	
101	BAY13A	13.800	B1	58.6	32.4	50.0	-25.0	0.9900	67.7	0.8752	96.0			1	6	SYST
102	BAY13B	13.800	B2	58.0	32.4	50.0	-25.0	0.9900	67.1	0.8733	96.0			1	6	
142	CANJ13A	13.800	C1	46.0	14.9	29.0	-29.0	1.0000	48.3	0.9515	69.0			1	6	
143	CANJ13B	13.800	C2	46.0	14.9	29.0	-29.0	1.0000	48.3	0.9515	69.0			1	6	
150	GUALACA 13-2	13.800	G2	11.0	-0.5	7.4	-7.4	1.0000	11.0	0.9988	14.8			1	6	
151	GUALACA13.8	13.800	G1	11.0	-0.5	7.4	-7.4	1.0000	11.0	0.9988	14.8			1	6	
193	GEBONYIC	13.800	G1	9.0	-0.4	4.0	-4.0	1.0000	9.0	0.9990	35.3			1	6	
193	GEBONYIC	13.800	G2	9.0	-0.4	4.0	-4.0	1.0000	9.0	0.9990	35.3			1	6	
193	GEBONYIC	13.800	G3	9.0	-0.4	4.0	-4.0	1.0000	9.0	0.9990	35.3			1	6	
204	BJOMIN13	13.800	G1	22.0	-7.5	13.0	-13.0	1.0000	23.2	0.9467	28.9			1	6	
204	BJOMIN13	13.800	G2	22.0	-7.5	13.0	-13.0	1.0000	23.2	0.9467	28.9			1	6	
205	BAITUN13.8	13.800	G1	33.0	11.6	26.6	-26.6	1.0000	35.0	0.9436	50.6			1	6	
205	BAITUN13.8	13.800	G2	33.0	11.6	26.6	-26.6	1.0000	35.0	0.9436	50.6			1	6	
301	CONC13.8	13.800	G1	9.5	5.0	5.0	-5.0	0.9538	11.3	0.8849	13.5			1	6	
302	PASOANCH13.8	13.800	P1	4.8	2.0	2.0	-2.0	0.9519	5.4	0.9216	6.2			1	6	
304	ALGA13.8	13.800	A1	9.2	0.0	2.0	0.0	1.1016	8.4	1.0000	13.5			1	6	
307	CHAN1 A	13.800	G1	77.0	-11.2	50.0	-50.0	1.0000	77.8	0.9895	118.6			1	6	
317	MENDRE13.8	13.800	M1	9.0	0.0	0.0	0.0	1.1010	8.2	1.0000	35.3			1	6	
317	MENDRE13.8	13.800	M2	9.0	0.0	0.0	0.0	1.1010	8.2	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C1	5.0	0.0	0.0	0.0	1.1014	4.5	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C2	5.0	0.0	0.0	0.0	1.1014	4.5	1.0000	35.3			1	6	
324	POTRER 13.8	13.800	P1	3.5	1.3	2.0	-2.0	1.0000	3.7	0.9362	6.2			1	6	
340	PEDGALITO138	13.800	P1	20.0	10.5	12.0	-5.0	1.0000	22.6	0.8845	27.0			1	6	
342	LORENA13.8	13.800	L1	12.0	-2.2	10.5	-5.0	1.0000	12.2	0.9836	19.9			1	6	
343	PRUDENCIA138	13.800	G1	21.0	-4.8	9.8	-9.8	1.0000	21.5	0.9746	33.0			1	6	
344	PRUDENCI13-2	13.800	G2	21.0	-4.8	9.8	-9.8	1.0000	21.5	0.9746	33.0			1	6	
346	LORENA 13-2	13.800	L2	12.0	-2.2	10.5	-5.0	1.0000	12.2	0.9836	19.9			1	6	
350	MACANO 13.8	13.800	G1	3.3	-2.0	2.0	-2.0	1.0645	3.6	0.8522	6.2			1	6	
351	PERLAS N 13	13.800	G1	9.0	5.0	5.0	-5.0	0.9697	10.6	0.8742	13.5			1	6	
352	PERLAS S 13	13.800	G1	9.0	5.0	5.0	-5.0	0.9697	10.6	0.8742	13.5			1	6	
353	PORVEN N 13	13.800	G1	3.1	0.0	2.0	0.0	1.0657	2.9	1.0000	6.2			1	6	
523	TCATIVÁ 13A	13.800	G1	8.2	4.4	6.6	-6.6	0.9900	9.4	0.8806	10.9			1	6	
523	TCATIVÁ 13A	13.800	G2	8.2	4.4	6.6	-6.6	0.9900	9.4	0.8806	10.9			1	6	
523	TCATIVÁ 13A	13.800	G3	8.2	4.4	6.6	-6.6	0.9900	9.4	0.8806	10.9			1	6	

523	TCATIVÁ 13A	13.800	G4	8.2	4.4	6.6	-6.6	0.9900	9.4	0.8806	10.9			1	6
523	TCATIVÁ 13A	13.800	G5	8.2	4.4	6.6	-6.6	0.9900	9.4	0.8806	10.9			1	6
541	TOABRE	0.6000	1	60.0	0.0	0.0	0.0	0.9646	62.2	1.0000	166.7			1	6
SUBSYSTEM TOTALS				1128.0	217.7	672.5	-522.4				1852.6				

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 8:57
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MAX INV CONT VEL-LSA

AREA 7 [ACANAL] MACHINE SUMMARY:

BUS#	X-- NAME	--X BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
129	MIR13D	13.800	G4	35.0	3.4	15.0	0.0	1.0000	35.2	0.9954	44.1			2	7	
130	MIR13F	13.800	G5	17.1	0.0	8.0	0.0	1.0043	17.0	1.0000	27.7			2	7	
140	GAT6A	6.9000	G1	1.9	0.2	2.0	-2.0	1.0000	1.9	0.9961	4.1			2	7	
140	GAT6A	6.9000	G2	1.9	0.2	2.0	-2.0	1.0000	1.9	0.9961	4.1			2	7	
140	GAT6A	6.9000	G3	1.9	0.2	2.0	-2.0	1.0000	1.9	0.9961	4.1			2	7	
141	GAT6B	6.9000	G4	3.9	-0.6	3.0	-3.0	1.0000	3.9	0.9897	5.6			2	7	
141	GAT6B	6.9000	G5	3.9	-0.6	3.0	-3.0	1.0000	3.9	0.9897	6.2			2	7	
141	GAT6B	6.9000	G6	3.9	-0.6	3.0	-3.0	1.0000	3.9	0.9897	6.2			2	7	
170	MIR13G	13.800	M1	17.0	6.8	11.2	6.8	1.0189	18.0	0.9281	23.0			2	7	
171	MIR13H	13.800	M1	17.0	6.8	11.2	6.8	1.0280	17.8	0.9281	23.0			2	7	
171	MIR13H	13.800	M2	17.0	6.8	11.2	6.8	1.0280	17.8	0.9281	23.0			2	7	
SUBSYSTEM TOTALS				120.5	22.7	71.5	5.5				171.3					

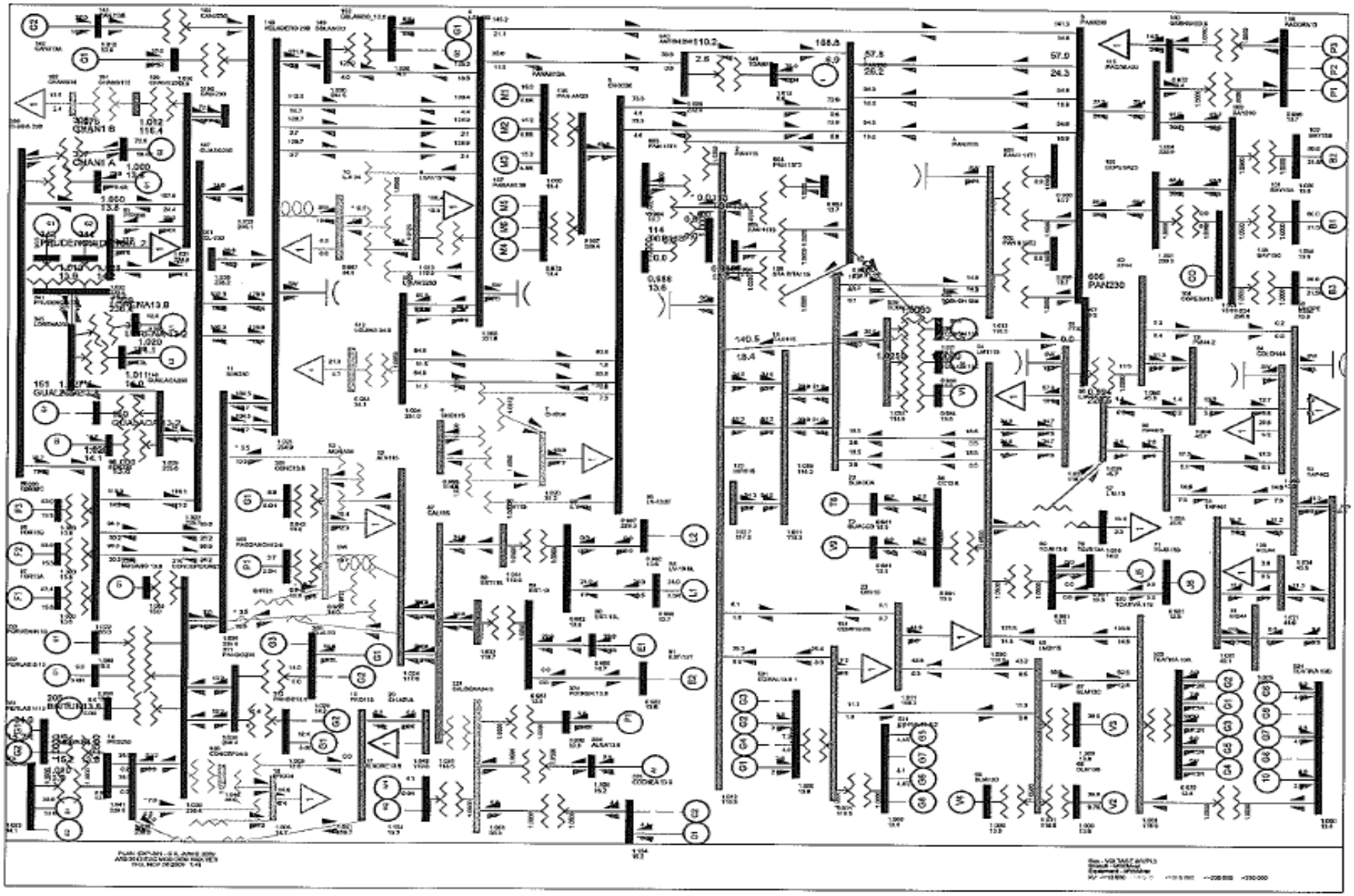
PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 8:57
PLAN EXP-SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MAX INV CONT VEL-LSA

AREA TOTALS
IN MW/MVAR

X-- AREA	--X	FROM GENERATION	TO LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
1		1347.4	1312.2	0.0	0.0	0.0	0.0	35.2	0.0
GUATEMAL		29.8	349.5	-266.2	0.0	412.9	17.9	341.4	
2		911.8	902.0	0.0	0.0	0.0	0.0	9.8	0.0
SALVADOR		100.8	182.3	-58.1	0.0	219.9	38.4	158.1	
3		1006.9	985.5	0.0	0.0	0.0	0.0	21.4	0.0
HONDURAS		55.8	290.6	-188.3	0.0	302.8	-5.2	261.6	
4		538.2	527.1	0.0	0.0	0.0	0.0	11.1	0.0
NICA		33.0	224.5	-98.8	0.0	143.2	-96.8	147.4	
5		1344.9	1324.8	0.0	0.0	0.0	0.4	19.7	0.0
C.RICA		272.8	569.4	-236.9	0.0	474.9	55.3	360.0	
6		1128.0	1114.8	0.0	0.0	0.0	-79.2	80.2	25.0
PANAMA		217.7	195.3	-226.3	0.0	423.7	-9.7	680.0	
7		120.5	40.4	0.0	0.0	0.0	78.8	1.3	50.0
ACANAL		22.7	7.1	0.0	0.0	0.0	0.2	15.4	

9	0.0	12.2	0.0	0.0	0.0	0.0	0.0	-75.0
COLON	0.0	2.1	0.0	0.0	0.0	0.0	0.0	
TOTALS	6397.7	6218.9	0.0	0.0	0.0	0.0	178.8	0.0
	732.6	1820.8	-1074.6	0.0	1977.5	0.0	1963.9	

Año 2012
Demanda Máxima de Verano



PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, NOV 26 2009 7:48
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MAX VER

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
8	LSA230	230.00	6	1.0076	231.75	11	M.N230	230.00	6	1.0251	235.78
14	PRO230	230.00	6	1.0392	239.01	85	PTP230	230.00	6	1.0231	235.32
96	FOR230	230.00	6	1.0219	235.05	100	BAY230	230.00	6	1.0243	235.58
103	COPESA23	230.00	6	1.0011	230.25	115	PACORA23	230.00	6	1.0039	230.90
144	CANJ230	230.00	6	1.0224	235.15	145	BJOMIN230	230.00	6	1.0413	239.49
146	GUALACA230	230.00	6	1.0245	235.64	147	GUASQ230	230.00	6	1.0222	235.10
148	VELADERO 230	230.00	6	1.0213	234.89	149	BBLANCO	230.00	6	1.0197	234.54
190	CHANG230	230.00	6	1.0211	234.85	306	CHAN1 230	230.00	6	1.0197	234.54
310	CONCEPCION23	230.00	6	1.0363	238.35	311	PANDO230	230.00	6	1.0363	238.35
341	PRUDENCIA230	230.00	6	1.0278	236.40	345	LORENA230	230.00	6	1.0269	236.20
511	LGUIAS230	230.00	6	1.0042	230.96	540	ANTON 230	230.00	6	1.0088	232.02
6000	FRONTER	230.00	6	1.0384	238.84						

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
1	PAN230	230.00	6	0.9928	228.35	3	PANII230	230.00	6	0.9965	229.20
5	CHO230	230.00	6	0.9971	229.34	105	PAN-AM23	230.00	6	0.9972	229.35
606	PAN230	230.00	6	0.9936	228.52						

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, NOV 26 2009 7:49
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MAX VER

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
2	PAN115	115.00	6	1.0116	116.33	4	PANII115	115.00	6	1.0135	116.55
9	LSA115	115.00	6	1.0133	116.53	12	M.N115	115.00	6	1.0243	117.80
15	PRO115	115.00	6	1.0410	119.72	18	CAC115	115.00	6	1.0113	116.30
19	C.V115	115.00	6	1.0052	115.59	20	CH.AZUL	115.00	6	1.0418	119.81
21	C.BAN115	115.00	6	1.0024	115.28	23	CH115	115.00	6	1.0115	116.32
26	LOC115	115.00	6	1.0034	115.39	30	MAR115	115.00	6	1.0023	115.27
33	STM115	115.00	6	1.0098	116.13	37	SAN115	115.00	6	1.0014	115.16
48	TINAJ115	115.00	6	1.0094	116.08	50	M.O115	115.00	6	1.0095	116.09
52	TOC115	115.00	6	1.0109	116.25	54	LM1115	115.00	6	1.0301	118.46
55	LM2115	115.00	6	1.0311	118.58	61	FFIELD	115.00	6	1.0273	118.14
87	CAL115	115.00	6	1.0306	118.52	88	EST115	115.00	6	1.0318	118.66
92	L.V115	115.00	6	1.0310	118.57	109	STA RITA115	115.00	6	1.0285	118.28
123	MIR115	115.00	7	1.0174	117.00	154	CEMPAN15	115.00	6	1.0309	118.55
191	CHANG115	115.00	6	1.0120	116.38	522	TCATIVÁ 115	115.00	6	1.0307	118.54
529	TCOLON 115	115.00	6	1.0329	118.78						

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)

6 CHO115 115.00 6 0.9983 114.80

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, NOV 26 2009 7:50
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MAX VER

AREA 6 [PANAMA] MACHINE SUMMARY:

BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
66	BLM13B	13.800	V2	38.0	9.7	25.0	0.0	1.0000	39.2	0.9687	47.0			1	6	
67	BLM13C	13.800	V3	38.0	9.7	25.0	0.0	1.0000	39.2	0.9687	47.0			1	6	
68	BLM13D	13.800	V4	38.0	10.1	25.0	0.0	1.0000	39.3	0.9666	47.0			1	6	
90	EST-13L	13.800	E1	22.0	3.1	12.0	-5.0	0.9900	22.4	0.9901	27.0			1	6	
94	LV-13.8L	13.800	L1	24.0	3.5	12.0	-5.0	0.9900	24.5	0.9896	27.0			1	6	
97	FOR13A	13.800	F1	87.4	-15.8	50.0	-50.0	1.0000	88.8	0.9840	111.0			1	6	SYST
98	FOR13B	13.800	F2	93.0	-15.3	50.0	-50.0	1.0000	94.2	0.9868	111.0			1	6	
99	FOR13C	13.800	F3	93.0	-15.3	50.0	-50.0	1.0000	94.2	0.9868	111.0			1	6	
101	BAY13A	13.800	B1	60.0	21.5	50.0	-25.0	1.0000	63.7	0.9412	96.0			1	6	
102	BAY13B	13.800	B2	60.0	21.5	50.0	-25.0	1.0000	63.7	0.9412	96.0			1	6	
106	PANAM13A	13.800	M1	15.2	4.8	9.0	0.0	1.0000	15.9	0.9544	20.7			1	6	
106	PANAM13A	13.800	M2	15.2	4.8	9.0	0.0	1.0000	15.9	0.9544	20.7			1	6	
106	PANAM13A	13.800	M3	15.2	4.8	9.0	0.0	1.0000	15.9	0.9544	20.7			1	6	
108	BAY13C	13.800	B3	60.0	21.5	50.0	-25.0	1.0000	63.7	0.9412	100.0			1	6	
142	CANJ13A	13.800	C1	37.0	10.3	29.0	-29.0	1.0100	38.0	0.9633	69.0			1	6	
143	CANJ13B	13.800	C2	37.0	10.3	29.0	-29.0	1.0100	38.0	0.9633	69.0			1	6	
150	GUALACA 13-2	13.800	G2	13.0	-5.8	7.4	-7.4	1.0000	14.2	0.9133	14.8			1	6	
152	BBLANCO_13.8	13.800	G1	6.6	0.0	6.1	0.0	1.0197	6.5	1.0000	11.6			1	6	
193	GEBONYIC	13.800	G1	8.3	-3.8	4.0	-4.0	1.0000	9.1	0.9112	35.3			1	6	
204	BJOMIN13	13.800	G1	23.0	-13.0	13.0	-13.0	1.0231	25.8	0.8706	28.9			1	6	
205	BAITUN13.8	13.800	G1	34.0	15.2	26.6	-26.6	1.0100	36.9	0.9128	50.6			1	6	
301	CONC13.8	13.800	G1	8.9	5.0	5.0	-5.0	0.9423	10.8	0.8707	13.5			1	6	
302	PASOANCH13.8	13.800	P1	3.7	2.0	2.0	-2.0	0.9404	4.5	0.8823	6.2			1	6	
304	ALGA13.8	13.800	A1	7.2	0.0	2.0	0.0	1.1037	6.5	1.0000	13.5			1	6	
305	ELALTO	13.800	G1	14.0	-5.0	12.0	-5.0	1.0294	14.4	0.9417	20.6			1	6	
307	CHAN1 A	13.800	G1	72.0	-16.4	50.0	-50.0	1.0000	73.8	0.9751	118.6			1	6	
308	CHAN1 B	13.800	G2	72.0	-16.4	50.0	-50.0	1.0000	73.8	0.9751	118.6			1	6	
312	PANDO13.8	13.800	G1	12.4	-5.0	10.0	-5.0	1.0031	13.3	0.9274	19.9			1	6	
317	MENDRE13.8	13.800	M1	8.3	0.0	0.0	0.0	1.1035	7.5	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C1	4.4	0.0	0.0	0.0	1.1036	4.0	1.0000	35.3			1	6	
324	POTRER 13.8	13.800	P1	3.0	-1.8	2.0	-2.0	1.0000	3.5	0.8582	6.2			1	6	
340	PEDGALITO138	13.800	P1	16.0	7.8	12.0	-5.0	1.0100	17.6	0.8998	27.0			1	6	
342	LORENA13.8	13.800	L1	12.0	-2.2	10.5	-5.0	1.0200	12.0	0.9843	19.9			1	6	
343	PRUDENCIA_1	13.800	G1	20.0	-9.8	9.8	-9.8	1.0096	22.0	0.8987	33.0			1	6	
346	LORENA 13-2	13.800	L2	12.8	-5.0	10.5	-5.0	1.0114	13.5	0.9310	19.9			1	6	
351	PERLAS N 13	13.800	G1	9.0	5.0	5.0	-5.0	0.9900	10.4	0.8742	13.5			1	6	
352	PERLAS S 13	13.800	G1	9.0	5.0	5.0	-5.0	0.9900	10.4	0.8742	13.5			1	6	
521	EGIRAL13.8	13.800	G1	3.6	2.0	2.8	1.3	1.0000	4.1	0.8766	4.8			1	6	
521	EGIRAL13.8	13.800	G2	3.6	2.0	2.8	1.3	1.0000	4.1	0.8766	4.8			1	6	
523	TCATIVÁ 13A	13.800	G1	7.6	-1.1	6.6	-6.6	0.9700	7.9	0.9898	10.9			1	6	
523	TCATIVÁ 13A	13.800	G2	8.0	-1.2	6.6	-6.6	0.9700	8.3	0.9898	10.9			1	6	
523	TCATIVÁ 13A	13.800	G3	8.0	-1.2	6.6	-6.6	0.9700	8.3	0.9898	10.9			1	6	
523	TCATIVÁ 13A	13.800	G4	8.0	-1.2	6.6	-6.6	0.9700	8.3	0.9898	10.9			1	6	
523	TCATIVÁ 13A	13.800	G5	8.0	-1.2	6.6	-6.6	0.9700	8.3	0.9898	10.9			1	6	
524	TCATIVÁ 13B	13.800	10	8.0	3.9	6.6	-6.6	1.0000	8.9	0.8996	10.9			1	6	
524	TCATIVÁ 13B	13.800	G6	8.3	4.0	6.6	-6.6	1.0000	9.2	0.8996	10.9			1	6	
524	TCATIVÁ 13B	13.800	G7	8.3	4.0	6.6	-6.6	1.0000	9.2	0.8996	10.9			1	6	

525 TCOLON 13A	13.800	G1	35.0	19.3	19.3	19.3	1.0211	39.1	0.8760	44.4				1	6
531 EGIRAL13.8	213.800	G5	8.1	4.4	6.4	3.0	1.0000	9.2	0.8792	10.9				1	6
531 EGIRAL13.8	213.800	G6	8.1	4.4	6.4	3.0	1.0000	9.2	0.8792	10.9				1	6
541 TOABRE	0.6000	1	75.0	0.0	0.0	0.0	1.0117	74.1	1.0000	166.7				1	6
SUBSYSTEM TOTALS			1300.0	83.4	817.1	-522.4				2006.1					

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, NOV 26 2009 7:50
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MAX VER

AREA 7 [ACANAL] MACHINE SUMMARY:

BUS# X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
129 MIR13D	13.800	G4	35.0	0.0	15.0	0.0	1.0114	34.6	1.0000	44.1			2	7	
130 MIR13F	13.800	G5	17.0	0.0	8.0	0.0	1.0245	16.6	1.0000	27.7			2	7	
140 GAT6A	6.9000	G1	1.9	-0.7	2.0	-2.0	1.0100	2.0	0.9411	4.1			2	7	
140 GAT6A	6.9000	G2	1.9	-0.7	2.0	-2.0	1.0100	2.0	0.9411	4.1			2	7	
140 GAT6A	6.9000	G3	1.9	-0.7	2.0	-2.0	1.0100	2.0	0.9411	4.1			2	7	
141 GAT6B	6.9000	G4	3.9	-1.5	3.0	-3.0	1.0100	4.1	0.9355	5.6			2	7	
141 GAT6B	6.9000	G5	3.9	-1.5	3.0	-3.0	1.0100	4.1	0.9355	6.2			2	7	
141 GAT6B	6.9000	G6	3.9	-1.5	3.0	-3.0	1.0100	4.1	0.9355	6.2			2	7	
170 MIR13G	13.800	M1	17.0	6.8	11.2	6.8	1.0387	17.6	0.9281	23.0			2	7	
171 MIR13H	13.800	M1	17.0	6.8	11.2	6.8	1.0477	17.5	0.9281	23.0			2	7	
171 MIR13H	13.800	M2	17.0	6.8	11.2	6.8	1.0477	17.5	0.9281	23.0			2	7	
SUBSYSTEM TOTALS			120.4	14.0	71.5	5.5				171.3					

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, NOV 26 2009 7:52
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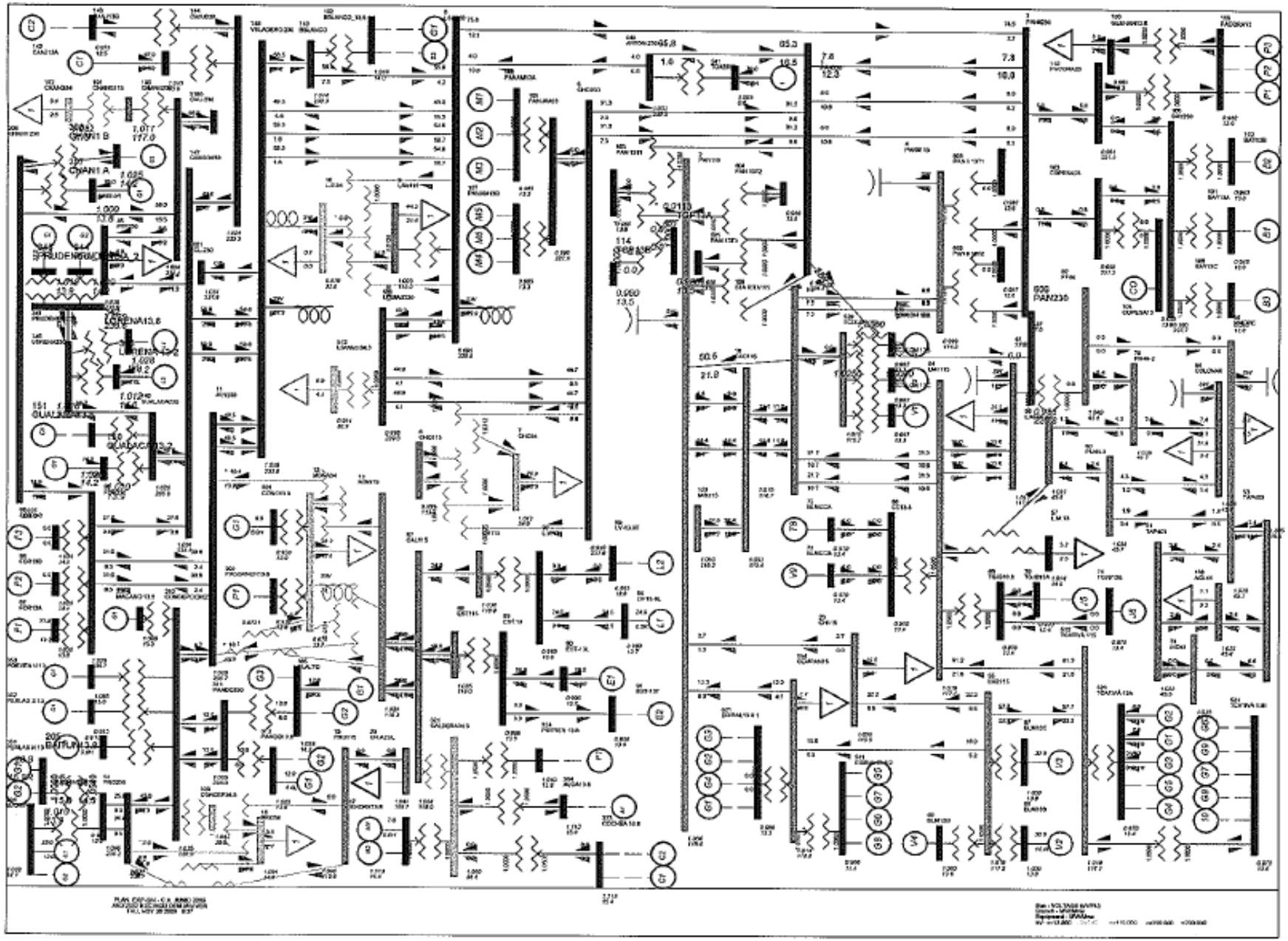
AñO 2012 ESC MOD DEM MAX VER

AREA TOTALS
IN MW/MVAR

X-- AREA --X	FROM GENERATION	TO LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
1	1199.9	1312.2	0.0	0.0	0.0	-145.0	32.8	-145.0
GUATEMAL	59.0	349.5	-265.8	0.0	412.0	39.7	347.6	
2	913.4	902.0	0.0	0.0	0.0	0.0	11.4	0.0
SALVADOR	109.0	182.3	-58.0	0.0	219.4	38.1	166.1	
3	1009.2	985.5	0.0	0.0	0.0	0.1	23.6	0.0
HONDURAS	68.2	290.6	-187.9	0.0	301.9	-9.9	277.3	
4	536.7	527.1	0.0	0.0	0.0	0.0	9.6	0.0
NICA	41.7	224.5	-98.5	0.0	142.6	-83.1	141.4	
5	1345.1	1324.8	0.0	0.0	0.0	0.4	19.9	0.0
C.RICA	235.9	569.4	-236.8	0.0	478.6	24.2	357.7	
6	1300.0	1182.7	0.0	0.0	0.0	68.1	36.3	170.0
PANAMA	83.4	207.2	-15.8	0.0	475.5	-0.7	366.0	
7	120.4	42.8	0.0	0.0	0.0	76.4	1.2	50.0
ACANAL	14.0	7.5	0.0	0.0	0.0	-8.2	14.7	

9	0.0	13.0	0.0	0.0	0.0	0.0	0.0	-75.0
COLON	0.0	2.3	0.0	0.0	0.0	0.0	0.0	
TOTALS	6424.7	6290.1	0.0	0.0	0.0	0.0	134.7	0.0
	611.2	1833.3	-862.8	0.0	2030.0	0.0	1670.8	

Demanda Mínima de Verano



PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, NOV 26 2009 9:43
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MIN VER

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
11	M.N230	230.00	6	1.0246	235.66	14	PRO230	230.00	6	1.0379	238.73
85	PTP230	230.00	6	1.0266	236.12	96	FOR230	230.00	6	1.0247	235.67
144	CANJ230	230.00	6	1.0240	235.51	145	BJOMIN230	230.00	6	1.0401	239.22
146	GUALACA230	230.00	6	1.0258	235.93	147	GUASQ230	230.00	6	1.0239	235.50
148	VELADERO 230	230.00	6	1.0158	233.64	149	BBLANCO	230.00	6	1.0144	233.32
190	CHANG230	230.00	6	1.0265	236.09	306	CHAN1 230	230.00	6	1.0255	235.86
310	CONCEPCION23	230.00	6	1.0346	237.96	311	PANDO230	230.00	6	1.0346	237.95
341	PRUDENCIA230	230.00	6	1.0288	236.62	345	LORENA230	230.00	6	1.0278	236.38
540	ANTON 230	230.00	6	1.0022	230.51	6000	FRONTER	230.00	6	1.0372	238.56

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
1	PAN230	230.00	6	0.9854	226.64	3	PANII230	230.00	6	0.9868	226.97
5	CHO230	230.00	6	0.9896	227.60	8	LSA230	230.00	6	0.9993	229.83
100	BAY230	230.00	6	0.9901	227.73	103	COPESA23	230.00	6	0.9878	227.19
105	PAN-AM23	230.00	6	0.9896	227.60	115	PACORA23	230.00	6	0.9879	227.23
511	LGUIAS230	230.00	6	0.9977	229.48	606	PAN230	230.00	6	0.9861	226.80

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, NOV 26 2009 9:44
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AñO 2012 ESC MOD DEM MIN VER

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
2	PAN115	115.00	6	1.0037	115.42	9	LSA115	115.00	6	1.0047	115.54
12	M.N115	115.00	6	1.0285	118.28	15	PRO115	115.00	6	1.0398	119.58
18	CAC115	115.00	6	1.0035	115.40	20	CH.AZUL	115.00	6	1.0406	119.67
23	CH115	115.00	6	1.0046	115.52	33	STM115	115.00	6	1.0025	115.29
48	TINAJ115	115.00	6	1.0022	115.26	50	M.O115	115.00	6	1.0023	115.27
54	LM1115	115.00	6	1.0181	117.09	55	LM2115	115.00	6	1.0190	117.19
61	FFIELD	115.00	6	1.0170	116.96	87	CAL115	115.00	6	1.0339	118.90
88	EST115	115.00	6	1.0349	119.01	92	L.V115	115.00	6	1.0343	118.94
109	STA RITA115	115.00	6	1.0149	116.71	123	MIR115	115.00	7	1.0100	116.15
154	CEMPAN15	115.00	6	1.0141	116.62	191	CHANG115	115.00	6	1.0173	116.98
522	TCATIVÁ 115	115.00	6	1.0186	117.14	529	TCOLON 115	115.00	6	1.0149	116.72

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
4	PANII115	115.00	6	0.9985	114.83	6	CHO115	115.00	6	0.9906	113.92
19	C.V115	115.00	6	0.9946	114.38	21	C.BAN115	115.00	6	0.9967	114.62
26	LOC115	115.00	6	0.9976	114.72	30	MAR115	115.00	6	0.9973	114.68
37	SAN115	115.00	6	0.9956	114.49	52	TOC115	115.00	6	0.9967	114.62

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, NOV 26 2009 9:46
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MIN VER

AREA 6 [PANAMA] MACHINE SUMMARY:

BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
66	BLM13B	13.800	V2	32.0	14.4	25.0	0.0	1.0000	35.1	0.9116	47.0			1	6	
67	BLM13C	13.800	V3	32.0	14.4	25.0	0.0	1.0000	35.1	0.9116	47.0			1	6	
68	BLM13D	13.800	V4	32.0	15.1	25.0	0.0	1.0000	35.4	0.9048	47.0			1	6	
90	EST-13L	13.800	E1	19.0	2.0	12.0	-5.0	0.9900	19.3	0.9946	27.0			1	6	
94	LV-13.8L	13.800	L1	24.0	2.5	12.0	-5.0	0.9900	24.4	0.9946	27.0			1	6	
97	FOR13A	13.800	F1	77.8	-19.2	50.0	-50.0	1.0000	80.1	0.9710	111.0			1	6	SYST
142	CANJ13A	13.800	C1	47.0	12.8	29.0	-29.0	1.0100	48.2	0.9651	69.0			1	6	
150	GUALACA 13-2	13.800	G2	10.0	-3.8	7.4	-7.4	1.0100	10.6	0.9350	14.8			1	6	
193	GEBONYIC	13.800	G1	8.3	-4.0	4.0	-4.0	1.0045	9.2	0.9014	35.3			1	6	
204	BJOMIN13	13.800	G1	23.0	-13.0	13.0	-13.0	1.0218	25.9	0.8706	28.9			1	6	
205	BAITUN13.8	13.800	G1	28.8	15.9	26.6	-26.6	1.0100	32.6	0.8754	50.6			1	6	
301	CONC13.8	13.800	G1	8.8	5.0	5.0	-5.0	0.9329	10.9	0.8706	13.5			1	6	
305	ELALTO	13.800	G1	12.0	-5.0	12.0	-5.0	1.0277	12.6	0.9231	20.6			1	6	
307	CHAN1 A	13.800	G1	70.0	-22.0	50.0	-50.0	1.0000	73.4	0.9539	118.6			1	6	
312	PANDO13.8	13.800	G1	12.0	-5.0	10.0	-5.0	1.0015	13.0	0.9231	19.9			1	6	
317	MENDRE13.8	13.800	M1	7.0	0.0	0.0	0.0	1.1130	6.3	1.0000	35.3			1	6	
340	PEDGALITO138	13.800	P1	16.0	8.2	12.0	-5.0	1.0100	17.8	0.8908	27.0			1	6	
343	PRUDENCIA_1	13.800	G1	23.0	-9.8	9.8	-9.8	1.0104	24.7	0.9205	33.0			1	6	
346	LORENA 13-2	13.800	L2	13.7	-5.0	10.5	-5.0	1.0121	14.5	0.9398	19.9			1	6	
351	PERLAS N 13	13.800	G1	8.9	5.0	5.0	-5.0	0.9884	10.3	0.8710	13.5			1	6	
523	TCATIVÁ 13A	13.800	G1	7.6	0.1	6.6	-6.6	0.9700	7.8	0.9999	10.9			1	6	
523	TCATIVÁ 13A	13.800	G2	8.0	0.1	6.6	-6.6	0.9700	8.2	0.9999	10.9			1	6	
523	TCATIVÁ 13A	13.800	G3	8.0	0.1	6.6	-6.6	0.9700	8.2	0.9999	10.9			1	6	
541	TOABRE	0.6000	1	70.0	0.0	0.0	0.0	1.0050	69.6	1.0000	166.7			1	6	
SUBSYSTEM TOTALS				598.9	8.9	363.0	-249.5				1005.5					

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, NOV 26 2009 9:46
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MIN VER

AREA 7 [ACANAL] MACHINE SUMMARY:

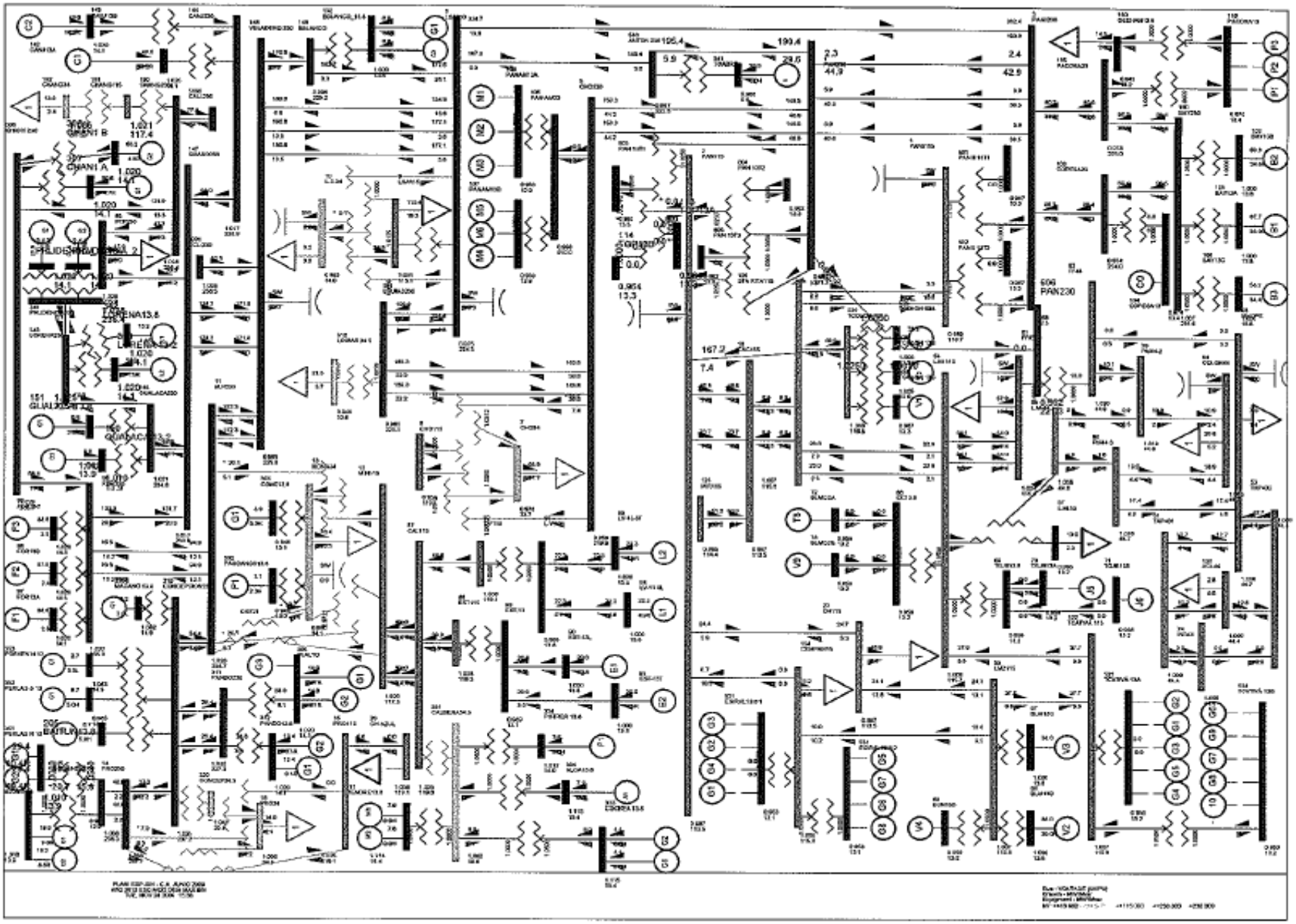
BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
170	MIR13G	13.800	M1	16.5	6.8	11.2	6.8	1.0399	17.2	0.9242	23.0			2	7	
171	MIR13H	13.800	M1	16.5	6.8	11.2	6.8	1.0490	17.0	0.9242	23.0			2	7	
171	MIR13H	13.800	M2	16.5	6.8	11.2	6.8	1.0490	17.0	0.9242	23.0			2	7	
SUBSYSTEM TOTALS				49.5	20.5	33.5	20.5				69.1					

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, NOV 26 2009 9:46
PLAN. EXP-SIN - C.A. JUNIO 2009 AREA TOTALS
AñO 2012 ESC MOD DEM MIN VER IN MW/MVAR

X-- AREA --X	FROM GENERATION	TO LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
1	1199.9	1312.2	0.0	0.0	0.0	-145.0	32.8	-145.0
GUATEMAL	59.0	349.5	-265.8	0.0	412.0	39.7	347.6	
2	913.4	902.0	0.0	0.0	0.0	0.0	11.4	0.0
SALVADOR	109.0	182.3	-58.0	0.0	219.4	38.1	166.1	
3	1009.2	985.5	0.0	0.0	0.0	0.1	23.6	0.0

HONDURAS	68.2	290.6	-187.9	0.0	301.9	-9.9	277.3	
4	536.7	527.1	0.0	0.0	0.0	0.0	9.6	0.0
NICA	41.6	224.5	-98.5	0.0	142.7	-83.1	141.4	
5	1345.1	1324.8	0.0	0.0	0.0	0.7	19.6	0.0
C.RICA	232.3	569.4	-236.9	0.0	478.7	22.8	355.7	
6	598.9	473.1	0.0	0.0	0.0	112.0	8.7	170.0
PANAMA	8.9	229.1	155.3	0.0	470.8	-14.8	107.6	
7	49.5	17.1	0.0	0.0	0.0	32.2	0.2	50.0
ACANAL	20.5	8.3	0.0	0.0	0.0	7.3	4.9	
9	0.0	5.2	0.0	0.0	0.0	0.0	0.0	-75.0
COLON	0.0	2.5	0.0	0.0	0.0	0.0	0.0	
TOTALS	5652.7	5547.0	0.0	0.0	0.0	0.0	105.8	0.0
	539.5	1856.2	-691.8	0.0	2025.3	0.0	1400.4	

Demanda Máxima de Invierno



PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E TUE, NOV 24 2009 14:28
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MAX INV

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
1	PAN230	230.00	6	1.0003	230.06	3	PANII230	230.00	6	1.0036	230.82
5	CHO230	230.00	6	1.0003	230.06	8	LSA230	230.00	6	1.0135	233.11
11	M.N230	230.00	6	1.0303	236.96	14	PRO230	230.00	6	1.0395	239.10
85	PTP230	230.00	6	1.0285	236.55	96	FOR230	230.00	6	1.0291	236.68
100	BAY230	230.00	6	1.0284	236.54	103	COPESA23	230.00	6	1.0077	231.77
105	PAN-AM23	230.00	6	1.0003	230.06	115	PACORA23	230.00	6	1.0102	232.34
144	CANJ230	230.00	6	1.0255	235.87	145	BJOMIN230	230.00	6	1.0410	239.43
146	GUALACA230	230.00	6	1.0289	236.66	147	GUASQ230	230.00	6	1.0253	235.82
148	VELADERO 230	230.00	6	1.0203	234.66	149	BBLANCO	230.00	6	1.0188	234.31
190	CHANG230	230.00	6	1.0312	237.19	306	CHAN1 230	230.00	6	1.0321	237.39
310	CONCEPCION23	230.00	6	1.0388	238.92	311	PANDO230	230.00	6	1.0388	238.93
341	PRUDENCIA230	230.00	6	1.0349	238.02	345	LORENA230	230.00	6	1.0328	237.55
511	LGUIAS230	230.00	6	1.0073	231.69	540	ANTON 230	230.00	6	1.0123	232.82
606	PAN230	230.00	6	1.0005	230.11	6000	FRONTER	230.00	6	1.0385	238.86

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)

* NONE *

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E TUE, NOV 24 2009 14:30
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MAX INV

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
2	PAN115	115.00	6	1.0245	117.82	4	PANII115	115.00	6	1.0252	117.90
6	CHO115	115.00	6	1.0014	115.16	9	LSA115	115.00	6	1.0403	119.64
12	M.N115	115.00	6	1.0260	117.99	15	PRO115	115.00	6	1.0414	119.76
18	CAC115	115.00	6	1.0242	117.78	19	C.V115	115.00	6	1.0174	117.00
20	CH.AZUL	115.00	6	1.0422	119.85	21	C.BAN115	115.00	6	1.0153	116.76
23	CH115	115.00	6	1.0209	117.40	26	LOC115	115.00	6	1.0163	116.87
30	MAR115	115.00	6	1.0153	116.76	33	STM115	115.00	6	1.0228	117.62
37	SAN115	115.00	6	1.0143	116.64	48	TINAJ115	115.00	6	1.0223	117.57
50	M.O115	115.00	6	1.0225	117.58	52	TOC115	115.00	6	1.0227	117.61
54	LM1115	115.00	6	1.0348	119.00	55	LM2115	115.00	6	1.0351	119.04
61	FFIELD	115.00	6	1.0320	118.68	87	CAL115	115.00	6	1.0387	119.45
88	EST115	115.00	6	1.0411	119.72	92	L.V115	115.00	6	1.0397	119.56
109	STA RITA115	115.00	6	1.0369	119.24	123	MIR115	115.00	7	1.0299	118.44
154	CEMPAN15	115.00	6	1.0312	118.59	191	CHANG115	115.00	6	1.0234	117.69
522	TCATIVÁ 115	115.00	6	1.0349	119.02	529	TCOLON 115	115.00	6	1.0455	120.23

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)

* NONE *

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E TUE, NOV 24 2009 14:36
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MAX INV

AREA 6 [PANAMA] MACHINE SUMMARY:

BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
66	BLM13B	13.800	V2	36.0	7.8	25.0	0.0	1.0000	36.8	0.9771	47.0			1	6	
67	BLM13C	13.800	V3	36.0	7.8	25.0	0.0	1.0000	36.8	0.9771	47.0			1	6	
90	EST-13L	13.800	E1	20.0	3.3	12.0	-5.0	1.0000	20.3	0.9870	27.0			1	6	
91	EST-13T	13.800	E2	20.0	3.3	12.0	-5.0	1.0000	20.3	0.9870	27.0			1	6	
94	LV-13.8L	13.800	L1	22.3	3.8	12.0	-5.0	1.0000	22.6	0.9856	27.0			1	6	
95	LV-13.8T	13.800	L2	22.3	3.8	12.0	-5.0	1.0000	22.6	0.9856	27.0			1	6	
97	FOR13A	13.800	F1	88.6	-4.3	50.0	-50.0	1.0200	86.9	0.9988	111.0			1	6	
98	FOR13B	13.800	F2	87.9	-4.3	50.0	-50.0	1.0200	86.3	0.9988	111.0			1	6	
99	FOR13C	13.800	F3	88.6	-4.3	50.0	-50.0	1.0200	87.0	0.9988	111.0			1	6	
101	BAY13A	13.800	B1	54.6	18.0	50.0	-25.0	1.0000	57.5	0.9496	96.0			1	6	SYST
102	BAY13B	13.800	B2	60.6	18.5	50.0	-25.0	1.0000	63.4	0.9565	96.0			1	6	
108	BAY13C	13.800	B3	58.2	18.3	50.0	-25.0	1.0000	61.0	0.9540	100.0			1	6	
142	CANJ13A	13.800	C1	49.0	14.8	29.0	-29.0	1.0200	50.2	0.9575	69.0			1	6	
143	CANJ13B	13.800	C2	49.0	14.8	29.0	-29.0	1.0200	50.2	0.9575	69.0			1	6	
150	GUALACA 13-2	13.800	G2	9.6	-4.6	7.4	-7.4	1.0100	10.5	0.9009	14.8			1	6	
151	GUALACA13.8	13.800	G1	9.5	-4.6	7.4	-7.4	1.0100	10.4	0.8990	14.8			1	6	
152	BBLANCO_13.8	13.800	G1	6.6	0.0	6.1	0.0	1.0186	6.5	1.0000	11.6			1	6	
152	BBLANCO_13.8	13.800	G2	6.6	0.0	6.1	0.0	1.0186	6.5	1.0000	11.6			1	6	
193	GEBONYIC	13.800	G1	8.3	-1.2	4.0	-4.0	1.0150	8.3	0.9900	35.3			1	6	
193	GEBONYIC	13.800	G2	8.1	-1.2	4.0	-4.0	1.0150	8.1	0.9900	35.3			1	6	
204	BJOMIN13	13.800	G1	19.6	-10.8	13.0	-13.0	1.0100	22.2	0.8754	28.9			1	6	
204	BJOMIN13	13.800	G2	19.2	-10.6	13.0	-13.0	1.0100	21.7	0.8754	28.9			1	6	
205	BAITUN13.8	13.800	G1	29.4	8.4	26.6	-26.6	1.0100	30.3	0.9611	50.6			1	6	
205	BAITUN13.8	13.800	G2	29.4	8.4	26.6	-26.6	1.0100	30.3	0.9611	50.6			1	6	
301	CONC13.8	13.800	G1	8.9	5.0	5.0	-5.0	0.9551	10.6	0.8707	13.5			1	6	
302	PASOANCH13.8	13.800	P1	3.7	2.0	2.0	-2.0	0.9532	4.5	0.8823	6.2			1	6	
304	ALGA13.8	13.800	A1	7.2	0.0	2.0	0.0	1.1189	6.4	1.0000	13.5			1	6	
305	ELALTO	13.800	G1	14.0	-5.0	12.0	-5.0	1.0245	14.5	0.9417	20.6			1	6	
305	ELALTO	13.800	G2	14.0	-5.0	12.0	-5.0	1.0245	14.5	0.9414	20.6			1	6	
307	CHAN1 A	13.800	G1	90.6	-7.9	50.0	-50.0	1.0200	89.1	0.9962	118.6			1	6	
308	CHAN1 B	13.800	G2	90.2	-7.9	50.0	-50.0	1.0200	88.8	0.9962	118.6			1	6	
312	PANDO13.8	13.800	G1	12.4	-0.7	10.0	-5.0	1.0200	12.2	0.9985	19.9			1	6	
312	PANDO13.8	13.800	G2	12.4	-0.7	10.0	-5.0	1.0200	12.2	0.9985	19.9			1	6	
317	MENDRE13.8	13.800	M1	7.6	0.0	0.0	0.0	1.1184	6.8	1.0000	35.3			1	6	
317	MENDRE13.8	13.800	M2	7.6	0.0	0.0	0.0	1.1184	6.8	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C1	4.4	0.0	0.0	0.0	1.1187	4.0	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C2	4.4	0.0	0.0	0.0	1.1187	4.0	1.0000	35.3			1	6	
324	POTRER 13.8	13.800	P1	3.6	2.0	2.0	-2.0	1.0160	4.1	0.8759	6.2			1	6	
340	PEDGALITO138	13.800	P1	15.8	7.2	12.0	-5.0	1.0100	17.2	0.9111	27.0			1	6	
342	LORENA13.8	13.800	L1	13.2	-4.1	10.5	-5.0	1.0200	13.6	0.9548	19.9			1	6	
343	PRUDENCIA_1	13.800	G1	21.6	-7.9	9.8	-9.8	1.0200	22.6	0.9387	33.0			1	6	
344	PRUDENCIA_2	13.800	G2	21.6	-7.9	9.8	-9.8	1.0200	22.6	0.9387	33.0			1	6	
346	LORENA 13-2	13.800	L2	14.0	-4.1	10.5	-5.0	1.0200	14.3	0.9600	19.9			1	6	
350	MACANO 13.8	13.800	G1	3.2	-2.0	2.0	-2.0	1.0895	3.5	0.8509	6.2			1	6	
351	PERLAS N 13	13.800	G1	8.7	5.0	5.0	-5.0	0.9923	10.1	0.8678	13.5			1	6	
352	PERLAS S 13	13.800	G1	8.7	5.0	5.0	-5.0	0.9923	10.1	0.8678	13.5			1	6	

353	PORVEN N 13	13.800	G1	2.7	0.0	2.0	0.0	1.0907	2.5	1.0000	6.2			1	6
525	TCOLON 13A	13.800	G1	33.3	19.3	19.3	19.3	1.0330	37.2	0.8654	44.4			1	6
526	TCOLON 13B	13.800	G2	33.3	19.3	19.3	19.3	1.0330	37.2	0.8654	44.4			1	6
541	TOABRE	0.6000	1	30.0	0.0	0.0	0.0	1.0135	29.6	1.0000	166.7			1	6
SUBSYSTEM TOTALS				1326.7	96.7	830.5	-542.1				2174.3				

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E TUE, NOV 24 2009 14:36
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MAX INV

AREA 7 [ACANAL] MACHINE SUMMARY:

BUS#	X-- NAME	--X BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
129	MIR13D	13.800	G4	35.0	0.0	15.0	0.0	1.0229	34.2	1.0000	44.1			2	7	
130	MIR13F	13.800	G5	17.0	0.0	8.0	0.0	1.0364	16.4	1.0000	27.7			2	7	
140	GAT6A	6.9000	G1	1.9	-0.9	2.0	-2.0	1.0100	2.1	0.9081	4.1			2	7	
140	GAT6A	6.9000	G2	1.9	-0.9	2.0	-2.0	1.0100	2.1	0.9081	4.1			2	7	
140	GAT6A	6.9000	G3	1.9	-0.9	2.0	-2.0	1.0100	2.1	0.9081	4.1			2	7	
141	GAT6B	6.9000	G4	3.9	-1.7	3.0	-3.0	1.0100	4.2	0.9188	5.6			2	7	
141	GAT6B	6.9000	G5	3.9	-1.7	3.0	-3.0	1.0100	4.2	0.9188	6.2			2	7	
141	GAT6B	6.9000	G6	3.9	-1.7	3.0	-3.0	1.0100	4.2	0.9188	6.2			2	7	
170	MIR13G	13.800	M1	17.0	6.8	11.2	6.8	1.0505	17.4	0.9281	23.0			2	7	
171	MIR13H	13.800	M1	17.0	6.8	11.2	6.8	1.0594	17.3	0.9281	23.0			2	7	
171	MIR13H	13.800	M2	17.0	6.8	11.2	6.8	1.0594	17.3	0.9281	23.0			2	7	
SUBSYSTEM TOTALS				120.4	12.8	71.5	5.5				171.3					

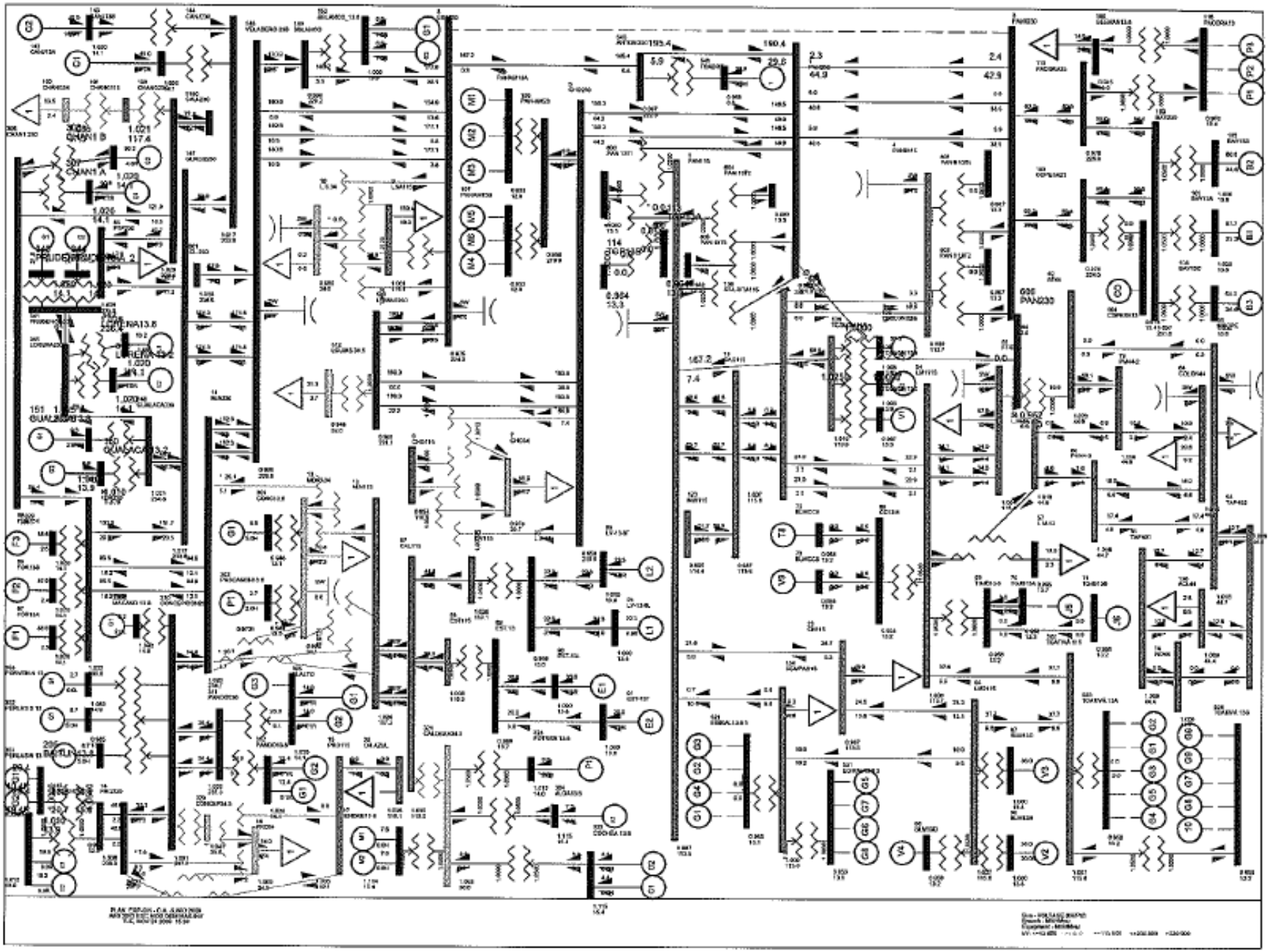
PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E TUE, NOV 24 2009 14:39
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MAX INV

AREA TOTALS
IN MW/MVAR

X-- AREA	--X	FROM GENERATION	TO LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
1		1199.9	1312.2	0.0	0.0	0.0	-145.0	32.8	-145.0
GUATEMAL		59.0	349.5	-265.8	0.0	412.0	39.7	347.6	
2		913.4	902.0	0.0	0.0	0.0	0.0	11.4	0.0
SALVADOR		109.0	182.3	-58.0	0.0	219.4	38.0	166.1	
3		1009.2	985.5	0.0	0.0	0.0	0.1	23.6	0.0
HONDURAS		68.2	290.6	-187.9	0.0	301.9	-9.9	277.3	
4		536.7	527.1	0.0	0.0	0.0	0.0	9.6	0.0
NICA		41.6	224.5	-98.5	0.0	142.7	-83.1	141.4	
5		1345.1	1324.8	0.0	0.0	0.0	0.0	20.2	0.0
C.RICA		229.9	569.4	-237.0	0.0	478.9	16.8	359.6	
6		1326.7	1182.7	0.0	0.0	0.0	68.6	62.5	170.0
PANAMA		96.7	207.2	-199.3	0.0	479.8	7.7	558.7	
7		120.4	42.8	0.0	0.0	0.0	76.3	1.2	50.0
ACANAL		12.8	7.5	0.0	0.0	0.0	-9.1	14.4	

9	0.0	13.0	0.0	0.0	0.0	0.0	0.0	-75.0
COLON	0.0	2.3	0.0	0.0	0.0	0.0	0.0	
TOTALS	6451.4	6290.1	0.0	0.0	0.0	0.0	161.4	0.0
	617.2	1833.3	-1046.5	0.0	2034.6	0.0	1865.1	

Contingencia Llano Sánchez – Panamá II



PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E TUE, NOV 24 2009 14:53
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MAX INV CONT. LLS-PA2

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
11	M.N230	230.00	6	1.0204	234.70	14	PRO230	230.00	6	1.0334	237.68
85	PTP230	230.00	6	1.0215	234.96	96	FOR230	230.00	6	1.0218	235.02
100	BAY230	230.00	6	1.0068	231.57	144	CANJ230	230.00	6	1.0170	233.90
145	BJOMIN230	230.00	6	1.0359	238.26	146	GUALACA230	230.00	6	1.0209	234.81
147	GUASQ230	230.00	6	1.0167	233.85	190	CHANG230	230.00	6	1.0277	236.37
306	CHAN1 230	230.00	6	1.0289	236.66	310	CONCEPCION23	230.00	6	1.0314	237.22
311	PANDO230	230.00	6	1.0319	237.33	341	PRUDENCIA230	230.00	6	1.0277	236.37
345	LORENA230	230.00	6	1.0253	235.83	6000	FRONTER	230.00	6	1.0322	237.40

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
1	PAN230	230.00	6	0.9623	221.32	3	PANII230	230.00	6	0.9676	222.54
5	CHO230	230.00	6	0.9562	219.93	8	LSA230	230.00	6	0.9754	224.34
103	COPESA23	230.00	6	0.9739	223.99	105	PAN-AM23	230.00	6	0.9562	219.93
115	PACORA23	230.00	6	0.9781	224.97	148	VELADERO 230	230.00	6	0.9992	229.82
149	BBLANCO	230.00	6	0.9965	229.19	511	LGUIAS230	230.00	6	0.9613	221.10
540	ANTON 230	230.00	6	0.9667	222.33	606	PAN230	230.00	6	0.9623	221.33

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E TUE, NOV 24 2009 14:54
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MAX INV CONT. LLS-PA2

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
9	LSA115	115.00	6	1.0006	115.07	12	M.N115	115.00	6	1.0202	117.33
15	PRO115	115.00	6	1.0353	119.05	20	CH.AZUL	115.00	6	1.0360	119.14
54	LM1115	115.00	6	1.0064	115.74	55	LM2115	115.00	6	1.0069	115.79
61	FFIELD	115.00	6	1.0038	115.43	87	CAL115	115.00	6	1.0349	119.01
88	EST115	115.00	6	1.0376	119.33	92	L.V115	115.00	6	1.0359	119.13
109	STA RITA115	115.00	6	1.0069	115.79	154	CEMPAN15	115.00	6	1.0003	115.03
191	CHANG115	115.00	6	1.0209	117.41	522	TCATIVÁ 115	115.00	6	1.0067	115.77
529	TCOLON 115	115.00	6	1.0157	116.80						

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME	--X BASKV	AREA	V(PU)	V(KV)
2	PAN115	115.00	6	0.9873	113.53	4	PANII115	115.00	6	0.9891	113.75
6	CHO115	115.00	6	0.9574	110.11	18	CAC115	115.00	6	0.9870	113.51
19	C.V115	115.00	6	0.9806	112.77	21	C.BAN115	115.00	6	0.9778	112.45
23	CH115	115.00	6	0.9871	113.52	26	LOC115	115.00	6	0.9788	112.56
30	MAR115	115.00	6	0.9778	112.44	33	STM115	115.00	6	0.9855	113.33
37	SAN115	115.00	6	0.9768	112.33	48	TINAJ115	115.00	6	0.9850	113.27
50	M.O115	115.00	6	0.9851	113.29	52	TOC115	115.00	6	0.9865	113.44
123	MIR115	115.00	7	0.9951	114.44						

AREA 6 [PANAMA] MACHINE SUMMARY:

BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
66	BLM13B	13.800	V2	36.0	20.0	25.0	0.0	1.0000	41.2	0.8746	47.0			1	6	
67	BLM13C	13.800	V3	36.0	20.0	25.0	0.0	1.0000	41.2	0.8746	47.0			1	6	
90	EST-13L	13.800	E1	20.0	4.3	12.0	-5.0	1.0000	20.4	0.9780	27.0			1	6	
91	EST-13T	13.800	E2	20.0	4.3	12.0	-5.0	1.0000	20.4	0.9780	27.0			1	6	
94	LV-13.8L	13.800	L1	22.3	4.9	12.0	-5.0	1.0000	22.8	0.9766	27.0			1	6	
95	LV-13.8T	13.800	L2	22.3	4.9	12.0	-5.0	1.0000	22.8	0.9766	27.0			1	6	
97	FOR13A	13.800	F1	88.6	2.5	50.0	-50.0	1.0200	86.9	0.9996	111.0			1	6	
98	FOR13B	13.800	F2	87.9	2.4	50.0	-50.0	1.0200	86.2	0.9996	111.0			1	6	
99	FOR13C	13.800	F3	88.6	2.5	50.0	-50.0	1.0200	86.9	0.9996	111.0			1	6	
101	BAY13A	13.800	B1	67.7	35.2	50.0	-25.0	1.0000	76.3	0.8870	96.0			1	6	SYST
102	BAY13B	13.800	B2	60.6	34.6	50.0	-25.0	1.0000	69.8	0.8683	96.0			1	6	
108	BAY13C	13.800	B3	58.2	34.4	50.0	-25.0	1.0000	67.7	0.8607	100.0			1	6	
142	CANJ13A	13.800	C1	49.0	16.2	29.0	-29.0	1.0200	50.6	0.9495	69.0			1	6	
143	CANJ13B	13.800	C2	49.0	16.2	29.0	-29.0	1.0200	50.6	0.9495	69.0			1	6	
150	GUALACA 13-2	13.800	G2	9.6	-2.6	7.4	-7.4	1.0100	9.8	0.9656	14.8			1	6	
151	GUALACA13.8	13.800	G1	9.5	-2.6	7.4	-7.4	1.0100	9.7	0.9649	14.8			1	6	
152	BBLANCO_13.8	13.800	G1	6.6	1.5	6.1	0.0	1.0000	6.8	0.9763	11.6			1	6	
152	BBLANCO_13.8	13.800	G2	6.6	1.5	6.1	0.0	1.0000	6.8	0.9763	11.6			1	6	
193	GEBONYIC	13.800	G1	8.3	-0.8	4.0	-4.0	1.0150	8.2	0.9957	35.3			1	6	
193	GEBONYIC	13.800	G2	8.1	-0.8	4.0	-4.0	1.0150	8.0	0.9957	35.3			1	6	
204	BJOMIN13	13.800	G1	19.6	-9.0	13.0	-13.0	1.0100	21.4	0.9093	28.9			1	6	
204	BJOMIN13	13.800	G2	19.2	-8.8	13.0	-13.0	1.0100	20.9	0.9093	28.9			1	6	
205	BAITUN13.8	13.800	G1	29.4	10.4	26.6	-26.6	1.0100	30.9	0.9432	50.6			1	6	
205	BAITUN13.8	13.800	G2	29.4	10.4	26.6	-26.6	1.0100	30.9	0.9432	50.6			1	6	
301	CONC13.8	13.800	G1	8.9	5.0	5.0	-5.0	0.9458	10.7	0.8707	13.5			1	6	
302	PASOANCH13.8	13.800	P1	3.7	2.0	2.0	-2.0	0.9439	4.5	0.8823	6.2			1	6	
304	ALGA13.8	13.800	A1	7.2	0.0	2.0	0.0	1.1147	6.4	1.0000	13.5			1	6	
305	ELALTO	13.800	G1	14.0	-4.1	12.0	-5.0	1.0200	14.3	0.9601	20.6			1	6	
305	ELALTO	13.800	G2	14.0	-4.1	12.0	-5.0	1.0200	14.3	0.9601	20.6			1	6	
307	CHAN1 A	13.800	G1	90.6	-4.7	50.0	-50.0	1.0200	88.9	0.9986	118.6			1	6	
308	CHAN1 B	13.800	G2	90.2	-4.8	50.0	-50.0	1.0200	88.6	0.9986	118.6			1	6	
312	PANDO13.8	13.800	G1	12.4	-0.1	10.0	-5.0	1.0200	12.2	1.0000	19.9			1	6	
312	PANDO13.8	13.800	G2	12.4	-0.1	10.0	-5.0	1.0200	12.2	1.0000	19.9			1	6	
317	MENDRE13.8	13.800	M1	7.6	0.0	0.0	0.0	1.1142	6.8	1.0000	35.3			1	6	
317	MENDRE13.8	13.800	M2	7.6	0.0	0.0	0.0	1.1142	6.8	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C1	4.4	0.0	0.0	0.0	1.1145	4.0	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C2	4.4	0.0	0.0	0.0	1.1145	4.0	1.0000	35.3			1	6	
324	POTRER 13.8	13.800	P1	3.6	2.0	2.0	-2.0	1.0123	4.1	0.8759	6.2			1	6	
340	PEDGALITO138	13.800	P1	15.8	8.9	12.0	-5.0	1.0100	18.0	0.8712	27.0			1	6	
342	LORENA13.8	13.800	L1	13.2	-1.6	10.5	-5.0	1.0200	13.0	0.9930	19.9			1	6	
343	PRUDENCIA_1	13.800	G1	21.6	-3.9	9.8	-9.8	1.0200	21.5	0.9841	33.0			1	6	
344	PRUDENCIA_2	13.800	G2	21.6	-3.9	9.8	-9.8	1.0200	21.5	0.9841	33.0			1	6	
346	LORENA 13-2	13.800	L2	14.0	-1.5	10.5	-5.0	1.0200	13.8	0.9940	19.9			1	6	
350	MACANO 13.8	13.800	G1	3.2	-2.0	2.0	-2.0	1.0818	3.5	0.8509	6.2			1	6	
351	PERLAS N 13	13.800	G1	8.7	5.0	5.0	-5.0	0.9853	10.2	0.8678	13.5			1	6	
352	PERLAS S 13	13.800	G1	8.7	5.0	5.0	-5.0	0.9853	10.2	0.8678	13.5			1	6	
353	PORVEN N 13	13.800	G1	2.7	0.0	2.0	0.0	1.0830	2.5	1.0000	6.2			1	6	
525	TCOLON 13A	13.800	G1	33.3	19.3	19.3	19.3	1.0055	38.2	0.8654	44.4			1	6	
526	TCOLON 13B	13.800	G2	33.3	19.3	19.3	19.3	1.0055	38.2	0.8654	44.4			1	6	

541 TOABRE	0.6000	1	30.0	0.0	0.0	0.0	0.9680	31.0	1.0000	166.7				1	6
SUBSYSTEM TOTALS			1339.8	237.3	830.5	-542.1				2174.3					

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E TUE, NOV 24 2009 14:56
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MAX INV CONT. LLS-PA2

AREA 7 [ACANAL] MACHINE SUMMARY:

BUS#	X-- NAME	--X BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
129	MIR13D	13.800	G4	35.0	5.1	15.0	0.0	1.0100	35.0	0.9896	44.1			2	7	
130	MIR13F	13.800	G5	17.0	0.0	8.0	0.0	1.0105	16.8	1.0000	27.7			2	7	
140	GAT6A	6.9000	G1	1.9	0.0	2.0	-2.0	1.0100	1.9	0.9998	4.1			2	7	
140	GAT6A	6.9000	G2	1.9	0.0	2.0	-2.0	1.0100	1.9	0.9998	4.1			2	7	
140	GAT6A	6.9000	G3	1.9	0.0	2.0	-2.0	1.0100	1.9	0.9998	4.1			2	7	
141	GAT6B	6.9000	G4	3.9	-0.7	3.0	-3.0	1.0100	3.9	0.9832	5.6			2	7	
141	GAT6B	6.9000	G5	3.9	-0.7	3.0	-3.0	1.0100	3.9	0.9832	6.2			2	7	
141	GAT6B	6.9000	G6	3.9	-0.7	3.0	-3.0	1.0100	3.9	0.9832	6.2			2	7	
170	MIR13G	13.800	M1	17.0	6.8	11.2	6.8	1.0249	17.9	0.9281	23.0			2	7	
171	MIR13H	13.800	M1	17.0	6.8	11.2	6.8	1.0340	17.7	0.9281	23.0			2	7	
171	MIR13H	13.800	M2	17.0	6.8	11.2	6.8	1.0340	17.7	0.9281	23.0			2	7	
SUBSYSTEM TOTALS				120.4	23.5	71.5	5.5				171.3					

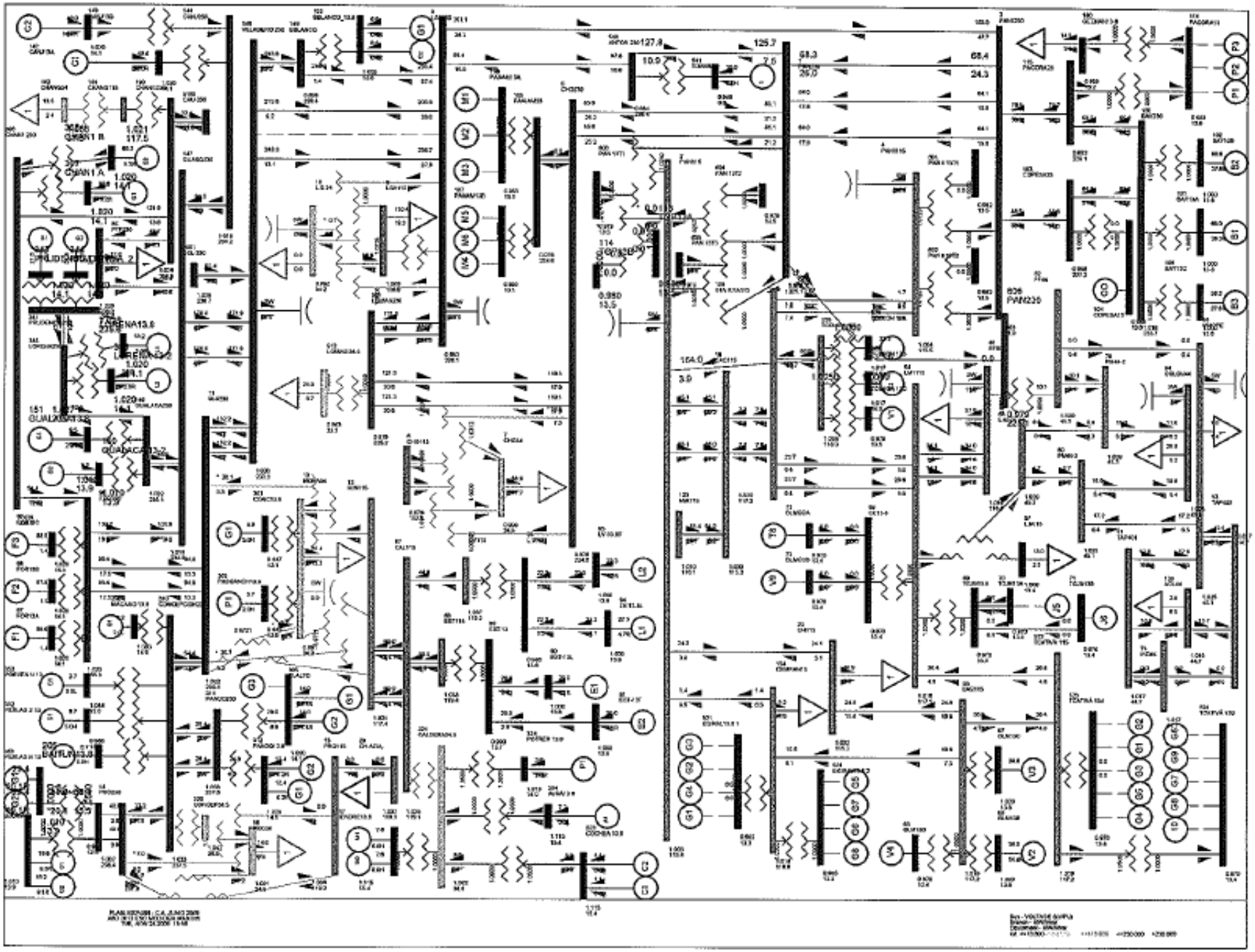
PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E TUE, NOV 24 2009 14:59
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MAX INV CONT. LLS-PA2

AREA TOTALS
IN MW/MVAR

X-- AREA	--X	FROM GENERATION	TO LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
1		1199.9	1312.2	0.0	0.0	0.0	-145.0	32.8	-145.0
GUATEMAL		59.0	349.5	-265.8	0.0	412.0	39.7	347.6	
2		913.4	902.0	0.0	0.0	0.0	0.0	11.4	0.0
SALVADOR		109.1	182.3	-58.0	0.0	219.4	38.1	166.1	
3		1009.2	985.5	0.0	0.0	0.0	0.1	23.6	0.0
HONDURAS		68.3	290.6	-187.8	0.0	301.9	-9.8	277.3	
4		536.7	527.1	0.0	0.0	0.0	0.0	9.6	0.0
NICA		41.9	224.5	-98.5	0.0	142.6	-82.9	141.4	
5		1345.1	1324.8	0.0	0.0	0.0	0.0	20.3	0.0
C.RICA		240.4	569.4	-236.5	0.0	477.7	24.9	360.2	
6		1339.8	1182.7	0.0	0.0	0.0	68.6	75.5	170.0
PANAMA		237.3	207.2	-185.5	0.0	432.9	-10.8	657.1	
7		120.4	42.8	0.0	0.0	0.0	76.3	1.3	50.0
ACANAL		23.5	7.5	0.0	0.0	0.0	0.9	15.1	
9		0.0	13.0	0.0	0.0	0.0	0.0	0.0	-75.0
COLON		0.0	2.3	0.0	0.0	0.0	0.0	0.0	

TOTALS	6464.6	6290.1	0.0	0.0	0.0	0.0	174.5	0.0
	779.5	1833.3	-1032.2	0.0	1986.5	0.0	1964.9	

Contingencia Veladero – Llano Sánchez



PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E TUE, NOV 24 2009 15:15
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MAX INV CONT. VEL-LLS

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
11	M.N230	230.00	6	1.0220	235.06	14	PRO230	230.00	6	1.0344	237.90
85	PTP230	230.00	6	1.0227	235.22	96	FOR230	230.00	6	1.0230	235.29
100	BAY230	230.00	6	1.0159	233.66	144	CANJ230	230.00	6	1.0184	234.22
145	BJOMIN230	230.00	6	1.0367	238.44	146	GUALACA230	230.00	6	1.0222	235.11
147	GUASQ230	230.00	6	1.0181	234.17	148	VELADERO 230	230.00	6	1.0027	230.62
190	CHANG230	230.00	6	1.0283	236.50	306	CHAN1 230	230.00	6	1.0295	236.78
310	CONCEPCION23	230.00	6	1.0325	237.48	311	PANDO230	230.00	6	1.0328	237.55
341	PRUDENCIA230	230.00	6	1.0289	236.64	345	LORENA230	230.00	6	1.0266	236.11
6000	FRONTER	230.00	6	1.0332	237.63						

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
1	PAN230	230.00	6	0.9788	225.11	3	PANII230	230.00	6	0.9826	226.01
5	CHO230	230.00	6	0.9764	224.57	8	LSA230	230.00	6	0.9831	226.12
103	COPESA23	230.00	6	0.9880	227.25	105	PAN-AM23	230.00	6	0.9764	224.57
115	PACORA23	230.00	6	0.9916	228.06	149	BBLANCO	230.00	6	0.9992	229.81
511	LGUIAS230	230.00	6	0.9793	225.24	540	ANTON 230	230.00	6	0.9844	226.41
606	PAN230	230.00	6	0.9789	225.15						

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E TUE, NOV 24 2009 15:15
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MAX INV CONT. VEL-LLS

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
2	PAN115	115.00	6	1.0032	115.37	4	PANII115	115.00	6	1.0045	115.51
9	LSA115	115.00	6	1.0087	116.00	12	M.N115	115.00	6	1.0212	117.43
15	PRO115	115.00	6	1.0362	119.16	18	CAC115	115.00	6	1.0029	115.34
20	CH.AZUL	115.00	6	1.0370	119.25	23	CH115	115.00	6	1.0016	115.18
33	STM115	115.00	6	1.0014	115.17	48	TINAJ115	115.00	6	1.0010	115.12
50	M.O115	115.00	6	1.0011	115.13	52	TOC115	115.00	6	1.0019	115.22
54	LM1115	115.00	6	1.0186	117.13	55	LM2115	115.00	6	1.0190	117.18
61	FFIELD	115.00	6	1.0158	116.82	87	CAL115	115.00	6	1.0355	119.08
88	EST115	115.00	6	1.0382	119.39	92	L.V115	115.00	6	1.0365	119.20
109	STA RITA115	115.00	6	1.0197	117.27	123	MIR115	115.00	7	1.0096	116.10
154	CEMPAN15	115.00	6	1.0135	116.55	191	CHANG115	115.00	6	1.0213	117.45
522	TCATIVÁ 115	115.00	6	1.0188	117.16	529	TCOLON 115	115.00	6	1.0284	118.27

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
6	CHO115	115.00	6	0.9776	112.42	19	C.V115	115.00	6	0.9963	114.57
21	C.BAN115	115.00	6	0.9939	114.29	26	LOC115	115.00	6	0.9949	114.41
30	MAR115	115.00	6	0.9938	114.29	37	SAN115	115.00	6	0.9928	114.18

AREA 6 [PANAMA] MACHINE SUMMARY:

BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
66	BLM13B	13.800	V2	36.0	14.8	25.0	0.0	1.0000	38.9	0.9251	47.0			1	6	
67	BLM13C	13.800	V3	36.0	14.8	25.0	0.0	1.0000	38.9	0.9251	47.0			1	6	
90	EST-13L	13.800	E1	20.0	4.1	12.0	-5.0	1.0000	20.4	0.9796	27.0			1	6	
91	EST-13T	13.800	E2	20.0	4.1	12.0	-5.0	1.0000	20.4	0.9796	27.0			1	6	
94	LV-13.8L	13.800	L1	22.3	4.7	12.0	-5.0	1.0000	22.8	0.9782	27.0			1	6	
95	LV-13.8T	13.800	L2	22.3	4.7	12.0	-5.0	1.0000	22.8	0.9782	27.0			1	6	
97	FOR13A	13.800	F1	88.6	1.4	50.0	-50.0	1.0200	86.8	0.9999	111.0			1	6	
98	FOR13B	13.800	F2	87.9	1.3	50.0	-50.0	1.0200	86.2	0.9999	111.0			1	6	
99	FOR13C	13.800	F3	88.6	1.4	50.0	-50.0	1.0200	86.9	0.9999	111.0			1	6	
101	BAY13A	13.800	B1	66.0	28.3	50.0	-25.0	1.0000	71.8	0.9191	96.0			1	6	SYST
102	BAY13B	13.800	B2	60.6	27.8	50.0	-25.0	1.0000	66.7	0.9088	96.0			1	6	
108	BAY13C	13.800	B3	58.2	27.6	50.0	-25.0	1.0000	64.5	0.9034	100.0			1	6	
142	CANJ13A	13.800	C1	49.0	16.0	29.0	-29.0	1.0200	50.5	0.9508	69.0			1	6	
143	CANJ13B	13.800	C2	49.0	16.0	29.0	-29.0	1.0200	50.5	0.9508	69.0			1	6	
150	GUALACA 13-2	13.800	G2	9.6	-2.9	7.4	-7.4	1.0100	9.9	0.9568	14.8			1	6	
151	GUALACA13.8	13.800	G1	9.5	-2.9	7.4	-7.4	1.0100	9.8	0.9558	14.8			1	6	
152	BBLANCO_13.8	13.800	G1	6.6	0.4	6.1	0.0	1.0000	6.6	0.9983	11.6			1	6	
152	BBLANCO_13.8	13.800	G2	6.6	0.4	6.1	0.0	1.0000	6.6	0.9983	11.6			1	6	
193	GEBONYIC	13.800	G1	8.3	-0.8	4.0	-4.0	1.0150	8.2	0.9949	35.3			1	6	
193	GEBONYIC	13.800	G2	8.1	-0.8	4.0	-4.0	1.0150	8.0	0.9949	35.3			1	6	
204	BJOMIN13	13.800	G1	19.6	-9.3	13.0	-13.0	1.0100	21.5	0.9042	28.9			1	6	
204	BJOMIN13	13.800	G2	19.2	-9.1	13.0	-13.0	1.0100	21.0	0.9042	28.9			1	6	
205	BAITUN13.8	13.800	G1	29.4	10.1	26.6	-26.6	1.0100	30.8	0.9461	50.6			1	6	
205	BAITUN13.8	13.800	G2	29.4	10.1	26.6	-26.6	1.0100	30.8	0.9461	50.6			1	6	
301	CONC13.8	13.800	G1	8.9	5.0	5.0	-5.0	0.9473	10.7	0.8707	13.5			1	6	
302	PASOANCH13.8	13.800	P1	3.7	2.0	2.0	-2.0	0.9454	4.5	0.8823	6.2			1	6	
304	ALGA13.8	13.800	A1	7.2	0.0	2.0	0.0	1.1154	6.4	1.0000	13.5			1	6	
305	ELALTO	13.800	G1	14.0	-4.4	12.0	-5.0	1.0200	14.4	0.9532	20.6			1	6	
305	ELALTO	13.800	G2	14.0	-4.4	12.0	-5.0	1.0200	14.4	0.9532	20.6			1	6	
307	CHAN1 A	13.800	G1	90.6	-5.2	50.0	-50.0	1.0200	88.9	0.9983	118.6			1	6	
308	CHAN1 B	13.800	G2	90.2	-5.3	50.0	-50.0	1.0200	88.6	0.9983	118.6			1	6	
312	PANDO13.8	13.800	G1	12.4	-0.2	10.0	-5.0	1.0200	12.2	0.9999	19.9			1	6	
312	PANDO13.8	13.800	G2	12.4	-0.2	10.0	-5.0	1.0200	12.2	0.9999	19.9			1	6	
317	MENDRE13.8	13.800	M1	7.6	0.0	0.0	0.0	1.1149	6.8	1.0000	35.3			1	6	
317	MENDRE13.8	13.800	M2	7.6	0.0	0.0	0.0	1.1149	6.8	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C1	4.4	0.0	0.0	0.0	1.1152	4.0	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C2	4.4	0.0	0.0	0.0	1.1152	4.0	1.0000	35.3			1	6	
324	POTRER 13.8	13.800	P1	3.6	2.0	2.0	-2.0	1.0129	4.1	0.8759	6.2			1	6	
340	PEDGALITO138	13.800	P1	15.8	8.6	12.0	-5.0	1.0100	17.9	0.8774	27.0			1	6	
342	LORENA13.8	13.800	L1	13.2	-2.0	10.5	-5.0	1.0200	13.1	0.9889	19.9			1	6	
343	PRUDENCIA_1	13.800	G1	21.6	-4.6	9.8	-9.8	1.0200	21.7	0.9784	33.0			1	6	
344	PRUDENCIA_2	13.800	G2	21.6	-4.6	9.8	-9.8	1.0200	21.7	0.9784	33.0			1	6	
346	LORENA 13-2	13.800	L2	14.0	-2.0	10.5	-5.0	1.0200	13.9	0.9904	19.9			1	6	
350	MACANO 13.8	13.800	G1	3.2	-2.0	2.0	-2.0	1.0829	3.5	0.8509	6.2			1	6	
351	PERLAS N 13	13.800	G1	8.7	5.0	5.0	-5.0	0.9864	10.2	0.8678	13.5			1	6	
352	PERLAS S 13	13.800	G1	8.7	5.0	5.0	-5.0	0.9864	10.2	0.8678	13.5			1	6	
353	PORVEN N 13	13.800	G1	2.7	0.0	2.0	0.0	1.0842	2.5	1.0000	6.2			1	6	
525	TCOLON 13A	13.800	G1	33.3	19.3	19.3	19.3	1.0172	37.8	0.8654	44.4			1	6	

526 TCOLON 13B	13.800	G2	33.3	19.3	19.3	19.3	1.0172	37.8	0.8654	44.4			1	6
541 TOABRE	0.6000	1	30.0	0.0	0.0	0.0	0.9857	30.4	1.0000	166.7			1	6
SUBSYSTEM TOTALS			1338.1	193.5	830.5	-542.1				2174.3				

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E TUE, NOV 24 2009 15:15
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MAX INV CONT. VEL-LLS

AREA 7 [ACANAL] MACHINE SUMMARY:

BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
129	MIR13D	13.800	G4	35.0	1.4	15.0	0.0	1.0100	34.7	0.9991	44.1			2	7	
130	MIR13F	13.800	G5	17.0	0.0	8.0	0.0	1.0195	16.7	1.0000	27.7			2	7	
140	GAT6A	6.9000	G1	1.9	-0.3	2.0	-2.0	1.0100	1.9	0.9853	4.1			2	7	
140	GAT6A	6.9000	G2	1.9	-0.3	2.0	-2.0	1.0100	1.9	0.9853	4.1			2	7	
140	GAT6A	6.9000	G3	1.9	-0.3	2.0	-2.0	1.0100	1.9	0.9853	4.1			2	7	
141	GAT6B	6.9000	G4	3.9	-1.1	3.0	-3.0	1.0100	4.0	0.9622	5.6			2	7	
141	GAT6B	6.9000	G5	3.9	-1.1	3.0	-3.0	1.0100	4.0	0.9622	6.2			2	7	
141	GAT6B	6.9000	G6	3.9	-1.1	3.0	-3.0	1.0100	4.0	0.9622	6.2			2	7	
170	MIR13G	13.800	M1	17.0	6.8	11.2	6.8	1.0338	17.7	0.9281	23.0			2	7	
171	MIR13H	13.800	M1	17.0	6.8	11.2	6.8	1.0428	17.6	0.9281	23.0			2	7	
171	MIR13H	13.800	M2	17.0	6.8	11.2	6.8	1.0428	17.6	0.9281	23.0			2	7	
SUBSYSTEM TOTALS				120.4	17.6	71.5	5.5				171.3					

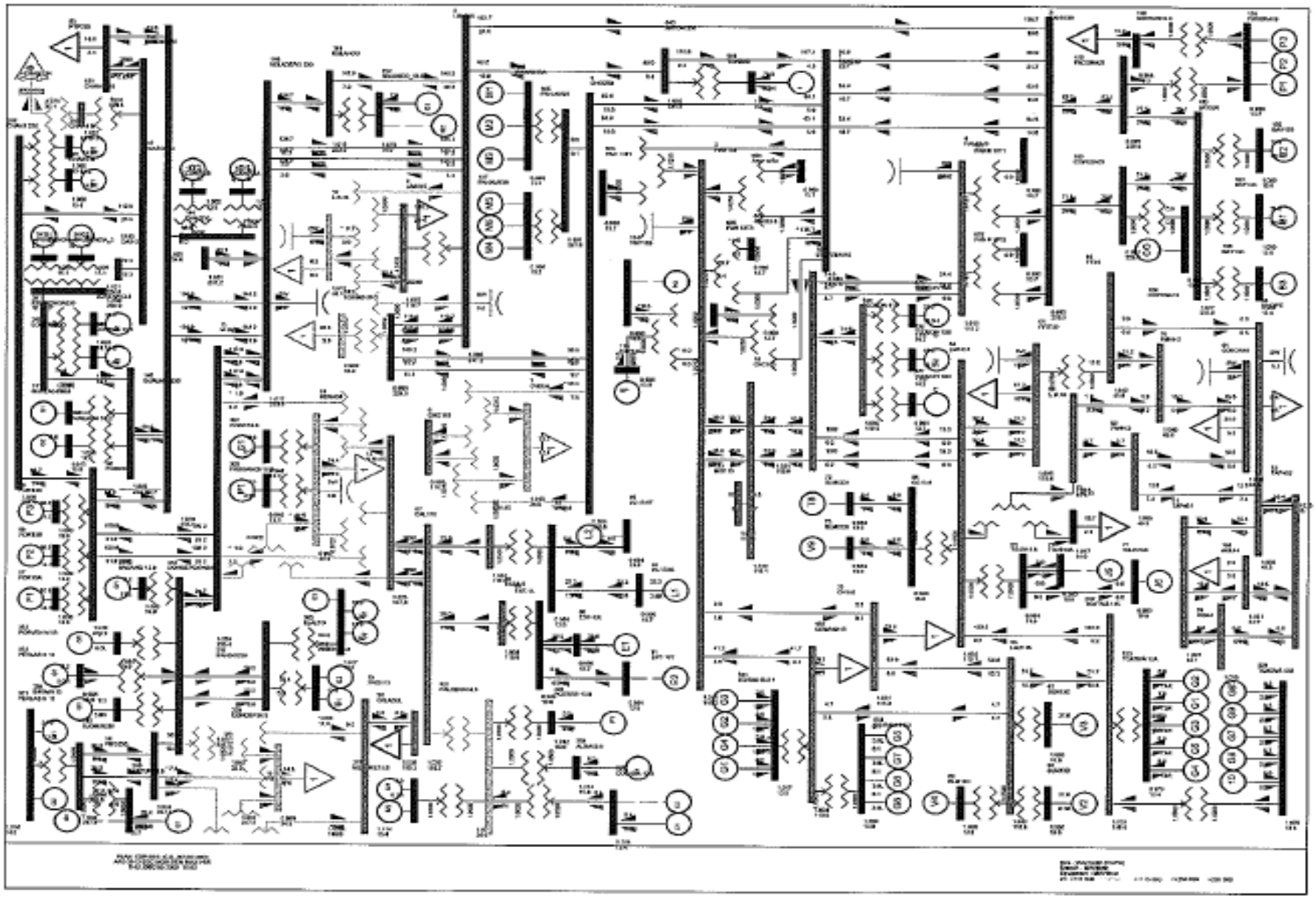
PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E TUE, NOV 24 2009 15:15
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MAX INV CONT. VEL-LLS

AREA TOTALS
IN MW/MVAR

X-- AREA --X	FROM GENERATION	TO LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
1	1199.9	1312.2	0.0	0.0	0.0	-145.0	32.8	-145.0
GUATEMAL	59.0	349.5	-265.8	0.0	412.0	39.7	347.6	
2	913.4	902.0	0.0	0.0	0.0	0.0	11.4	0.0
SALVADOR	109.1	182.3	-58.0	0.0	219.4	38.1	166.1	
3	1009.2	985.5	0.0	0.0	0.0	0.1	23.6	0.0
HONDURAS	68.3	290.6	-187.9	0.0	301.9	-9.8	277.3	
4	536.7	527.1	0.0	0.0	0.0	0.0	9.6	0.0
NICA	41.8	224.5	-98.5	0.0	142.6	-82.9	141.4	
5	1345.1	1324.8	0.0	0.0	0.0	0.0	20.2	0.0
C.RICA	238.7	569.4	-236.5	0.0	477.9	23.6	360.1	
6	1338.1	1182.7	0.0	0.0	0.0	68.6	73.9	170.0
PANAMA	193.5	207.2	-190.3	0.0	444.3	-3.9	622.5	
7	120.4	42.8	0.0	0.0	0.0	76.3	1.3	50.0
ACANAL	17.6	7.5	0.0	0.0	0.0	-4.7	14.8	
9	0.0	13.0	0.0	0.0	0.0	0.0	0.0	-75.0
COLON	0.0	2.3	0.0	0.0	0.0	0.0	0.0	

TOTALS	6462.8	6290.1	0.0	0.0	0.0	0.0	172.8	0.0
	728.0	1833.3	-1037.0	0.0	1998.0	0.0	1929.8	

Año 2013
Demanda Máxima de Verano



PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 11:43
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MAX VER

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
8	LSA230	230.00	6	1.0052	231.19	11	M.N230	230.00	6	1.0236	235.42
14	PRO230	230.00	6	1.0333	237.65	85	PTP230	230.00	6	1.0207	234.76
96	FOR230	230.00	6	1.0201	234.61	100	BAY230	230.00	6	1.0166	233.83
144	CANJ230	230.00	6	1.0193	234.45	145	BJOMIN230	230.00	6	1.0339	237.80
146	GUALACA230	230.00	6	1.0233	235.35	147	GUASQ230	230.00	6	1.0192	234.42
148	VELADERO 230	230.00	6	1.0170	233.91	149	BBLANCO	230.00	6	1.0154	233.55
190	CHANG230	230.00	6	1.0201	234.63	306	CHAN1 230	230.00	6	1.0190	234.38
310	CONCEPCION23	230.00	6	1.0322	237.41	311	PANDO230	230.00	6	1.0319	237.34
341	PRUDENCIA230	230.00	6	1.0302	236.94	345	LORENA230	230.00	6	1.0278	236.40
540	ANTON 230	230.00	6	1.0054	231.23	6000	FRONTER	230.00	6	1.0329	237.56

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
1	PAN230	230.00	6	0.9894	227.56	3	PANII230	230.00	6	0.9928	228.34
5	CHO230	230.00	6	0.9907	227.85	103	COPESA23	230.00	6	0.9968	229.26
105	PAN-AM23	230.00	6	0.9907	227.85	115	PACORA23	230.00	6	0.9991	229.79
511	LGUIAS230	230.00	6	0.9993	229.85						

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 11:44
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MAX VER

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
2	PAN115	115.00	6	1.0101	116.16	4	PANII115	115.00	6	1.0108	116.24
9	LSA115	115.00	6	1.0149	116.71	12	M.N115	115.00	6	1.0250	117.88
15	PRO115	115.00	6	1.0351	119.04	18	CAC115	115.00	6	1.0098	116.13
19	C.V115	115.00	6	1.0023	115.26	20	CH.AZUL	115.00	6	1.0359	119.13
21	C.BAN115	115.00	6	1.0001	115.02	23	CH115	115.00	6	1.0108	116.24
26	LOC115	115.00	6	1.0012	115.14	30	MAR115	115.00	6	1.0002	115.02
33	STM115	115.00	6	1.0082	115.95	48	TINAJ115	115.00	6	1.0077	115.89
50	M.O115	115.00	6	1.0079	115.91	52	TOC115	115.00	6	1.0081	115.93
54	LM1115	115.00	6	1.0323	118.71	55	LM2115	115.00	6	1.0333	118.83
61	FFIELD	115.00	6	1.0292	118.36	87	CAL115	115.00	6	1.0324	118.73
88	EST115	115.00	6	1.0335	118.85	92	L.V115	115.00	6	1.0328	118.78
109	STA RITA115	115.00	6	1.0315	118.62	123	MIR115	115.00	7	1.0158	116.81
154	CEMPAN15	115.00	6	1.0344	118.96	191	CHANG115	115.00	6	1.0109	116.25
522	TCATIVÁ 115	115.00	6	1.0330	118.79	529	TCOLON 115	115.00	6	1.0402	119.62

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME --X	BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --X	BASKV	AREA	V(PU)	V(KV)
6	CHO115	115.00	6	0.9919	114.07	37	SAN115	115.00	6	0.9990	114.89

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 11:44
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MAX VER

AREA 6 [PANAMA] MACHINE SUMMARY:

BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
66	BLM13B	13.800	V2	37.0	8.7	25.0	0.0	1.0000	38.0	0.9734	47.0			1	6	
67	BLM13C	13.800	V3	37.0	8.7	25.0	0.0	1.0000	38.0	0.9734	47.0			1	6	
68	BLM13D	13.800	V4	37.0	9.0	25.0	0.0	1.0000	38.1	0.9717	47.0			1	6	
90	EST-13L	13.800	E1	20.0	2.5	12.0	-5.0	0.9900	20.4	0.9925	27.0			1	6	
94	LV-13.8L	13.800	L1	22.3	2.8	12.0	-5.0	0.9900	22.7	0.9921	27.0			1	6	
97	FOR13A	13.800	F1	85.8	-14.3	50.0	-50.0	1.0000	87.0	0.9865	111.0			1	6	SYST
98	FOR13B	13.800	F2	80.9	-14.7	50.0	-50.0	1.0000	82.2	0.9839	111.0			1	6	
99	FOR13C	13.800	F3	80.6	-14.7	50.0	-50.0	1.0000	82.0	0.9837	111.0			1	6	
101	BAY13A	13.800	B1	75.0	28.6	50.0	-25.0	1.0000	80.3	0.9344	96.0			1	6	
102	BAY13B	13.800	B2	75.6	28.6	50.0	-25.0	1.0000	80.9	0.9352	96.0			1	6	
142	CANJ13A	13.800	C1	49.0	12.5	29.0	-29.0	1.0000	50.6	0.9689	69.0			1	6	
143	CANJ13B	13.800	C2	49.0	12.5	29.0	-29.0	1.0000	50.6	0.9689	69.0			1	6	
150	GUALACA 13-2	13.800	G2	13.6	-3.0	7.4	-7.4	1.0100	13.8	0.9765	14.8			1	6	
152	BBLANCO_13.8	13.800	G1	7.6	0.0	6.1	0.0	1.0154	7.5	1.0000	11.6			1	6	
193	GEBONYIC	13.800	G1	8.3	-1.6	4.0	-4.0	1.0000	8.5	0.9828	35.3			1	6	
193	GEBONYIC	13.800	G2	8.1	-1.5	4.0	-4.0	1.0000	8.3	0.9828	35.3			1	6	
204	BJOMIN13	13.800	G1	24.0	-13.0	13.0	-13.0	1.0155	26.9	0.8793	28.9			1	6	
205	BAITUN13.8	13.800	G1	32.4	4.8	26.6	-26.6	0.9900	33.1	0.9892	50.6			1	6	
301	CONC13.8	13.800	G1	9.0	5.0	5.0	-5.0	0.9481	10.9	0.8742	13.5			1	6	
302	PASOANCH13.8	13.800	P1	4.0	2.0	2.0	-2.0	0.9462	4.7	0.8930	6.2			1	6	
304	ALGA13.8	13.800	A1	8.2	0.0	2.0	0.0	1.1145	7.3	1.0000	13.5			1	6	
305	ELALTO	13.800	G1	16.0	-5.0	12.0	-5.0	1.0172	16.5	0.9545	20.6			1	6	
305	ELALTO	13.800	G2	17.0	-5.0	12.0	-5.0	1.0172	17.4	0.9592	20.6			1	6	
307	CHAN1 A	13.800	G1	81.5	-14.9	50.0	-50.0	1.0000	82.9	0.9836	118.6			1	6	
308	CHAN1 B	13.800	G2	81.5	-14.9	50.0	-50.0	1.0000	82.9	0.9836	118.6			1	6	
312	PANDO13.8	13.800	G1	13.4	-4.7	10.0	-5.0	1.0000	14.2	0.9438	19.9			1	6	
317	MENDRE13.8	13.800	M1	8.0	0.0	0.0	0.0	1.1144	7.2	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C1	5.4	0.0	0.0	0.0	1.1144	4.9	1.0000	35.3			1	6	
324	POTRER 13.8	13.800	P1	3.5	2.0	2.0	-2.0	1.0120	4.0	0.8682	6.2			1	6	
340	PEDGALITO138	13.800	P1	17.8	8.9	12.0	-5.0	1.0100	19.7	0.8955	27.0			1	6	
342	LORENA13.8	13.800	L1	15.2	-2.3	10.5	-5.0	1.0200	15.1	0.9885	19.9			1	6	
343	PRUDENCIA_1	13.800	G1	22.6	-5.3	9.8	-9.8	1.0200	22.8	0.9739	33.0			1	6	
344	PRUDENCIA_2	13.800	G2	22.6	-5.3	9.8	-9.8	1.0200	22.8	0.9739	33.0			1	6	
346	LORENA 13-2	13.800	L2	14.5	-2.4	10.5	-5.0	1.0200	14.4	0.9870	19.9			1	6	
350	MACANO 13.8	13.800	G1	3.2	-2.0	2.0	-2.0	1.0826	3.5	0.8509	6.2			1	6	
351	PERLAS N 13	13.800	G1	9.2	5.0	5.0	-5.0	0.9861	10.6	0.8791	13.5			1	6	
352	PERLAS S 13	13.800	G1	9.2	5.0	5.0	-5.0	0.9861	10.6	0.8791	13.5			1	6	
353	PORVEN N 13	13.800	G1	2.7	0.0	2.0	0.0	1.0838	2.5	1.0000	6.2			1	6	
521	EGIRAL13.8	113.800	G1	3.6	1.3	2.8	1.3	1.0074	3.8	0.9407	4.8			1	6	
521	EGIRAL13.8	113.800	G2	3.6	1.3	2.8	1.3	1.0074	3.8	0.9407	4.8			1	6	
521	EGIRAL13.8	113.800	G3	3.6	1.3	2.8	1.3	1.0074	3.8	0.9407	4.8			1	6	
521	EGIRAL13.8	113.800	G4	3.6	1.3	2.8	1.3	1.0074	3.8	0.9407	4.8			1	6	
523	TCATIVÁ 13A	13.800	G1	7.6	-1.3	6.6	-6.6	0.9700	7.9	0.9847	10.9			1	6	

523	TCATIVÁ 13A	13.800	G2	8.0	-1.4	6.6	-6.6	0.9700	8.4	0.9847	10.9		1	6
523	TCATIVÁ 13A	13.800	G3	8.0	-1.4	6.6	-6.6	0.9700	8.4	0.9847	10.9		1	6
523	TCATIVÁ 13A	13.800	G4	8.0	-1.4	6.6	-6.6	0.9700	8.4	0.9847	10.9		1	6
523	TCATIVÁ 13A	13.800	G5	8.0	-1.4	6.6	-6.6	0.9700	8.4	0.9847	10.9		1	6
524	TCATIVÁ 13B	13.800	10	8.0	2.2	6.6	-6.6	1.0000	8.3	0.9632	10.9		1	6
524	TCATIVÁ 13B	13.800	G6	8.3	2.3	6.6	-6.6	1.0000	8.6	0.9632	10.9		1	6
524	TCATIVÁ 13B	13.800	G7	8.3	2.3	6.6	-6.6	1.0000	8.6	0.9632	10.9		1	6
524	TCATIVÁ 13B	13.800	G8	8.3	2.3	6.6	-6.6	1.0000	8.6	0.9632	10.9		1	6
524	TCATIVÁ 13B	13.800	G9	8.3	2.3	6.6	-6.6	1.0000	8.6	0.9632	10.9		1	6
525	TCOLON 13A	13.800	G1	37.3	19.3	19.3	19.3	1.0275	40.8	0.8883	44.4		1	6
526	TCOLON 13B	13.800	G2	37.3	19.3	19.3	19.3	1.0275	40.8	0.8883	44.4		1	6
531	EGIRAL13.8	213.800	G5	8.1	3.0	6.4	3.0	1.0084	8.5	0.9374	10.9		1	6
531	EGIRAL13.8	213.800	G6	8.1	3.0	6.4	3.0	1.0084	8.5	0.9374	10.9		1	6
531	EGIRAL13.8	213.800	G7	8.1	3.0	6.4	3.0	1.0084	8.5	0.9374	10.9		1	6
531	EGIRAL13.8	213.800	G8	8.1	3.0	6.4	3.0	1.0084	8.5	0.9374	10.9		1	6
541	TOABRE	0.6000	1	70.0	0.0	0.0	0.0	1.0082	69.4	1.0000	166.7		1	6
SUBSYSTEM TOTALS				1379.8	82.2	820.7	-503.4				2043.2			

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 11:44
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MAX VER

AREA 7 [ACANAL] MACHINE SUMMARY:

BUS#	X-- NAME	--X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
129	MIR13D		13.800	G4	35.0	0.2	15.0	0.0	1.0100	34.7	1.0000	44.1			2	7	
130	MIR13F		13.800	G5	17.0	0.0	8.0	0.0	1.0225	16.6	1.0000	27.7			2	7	
140	GAT6A		6.9000	G1	1.9	-0.7	2.0	-2.0	1.0100	2.0	0.9401	4.1			2	7	
140	GAT6A		6.9000	G2	1.9	-0.7	2.0	-2.0	1.0100	2.0	0.9401	4.1			2	7	
140	GAT6A		6.9000	G3	1.9	-0.7	2.0	-2.0	1.0100	2.0	0.9401	4.1			2	7	
141	GAT6B		6.9000	G4	3.9	-1.5	3.0	-3.0	1.0100	4.1	0.9350	5.6			2	7	
141	GAT6B		6.9000	G5	3.9	-1.5	3.0	-3.0	1.0100	4.1	0.9350	6.2			2	7	
141	GAT6B		6.9000	G6	3.9	-1.5	3.0	-3.0	1.0100	4.1	0.9350	6.2			2	7	
170	MIR13G		13.800	M1	17.0	6.8	11.2	6.8	1.0368	17.7	0.9281	23.0			2	7	
171	MIR13H		13.800	M1	17.0	6.8	11.2	6.8	1.0458	17.5	0.9281	23.0			2	7	
171	MIR13H		13.800	M2	17.0	6.8	11.2	6.8	1.0458	17.5	0.9281	23.0			2	7	
SUBSYSTEM TOTALS					120.4	14.2	71.5	5.5				171.3					

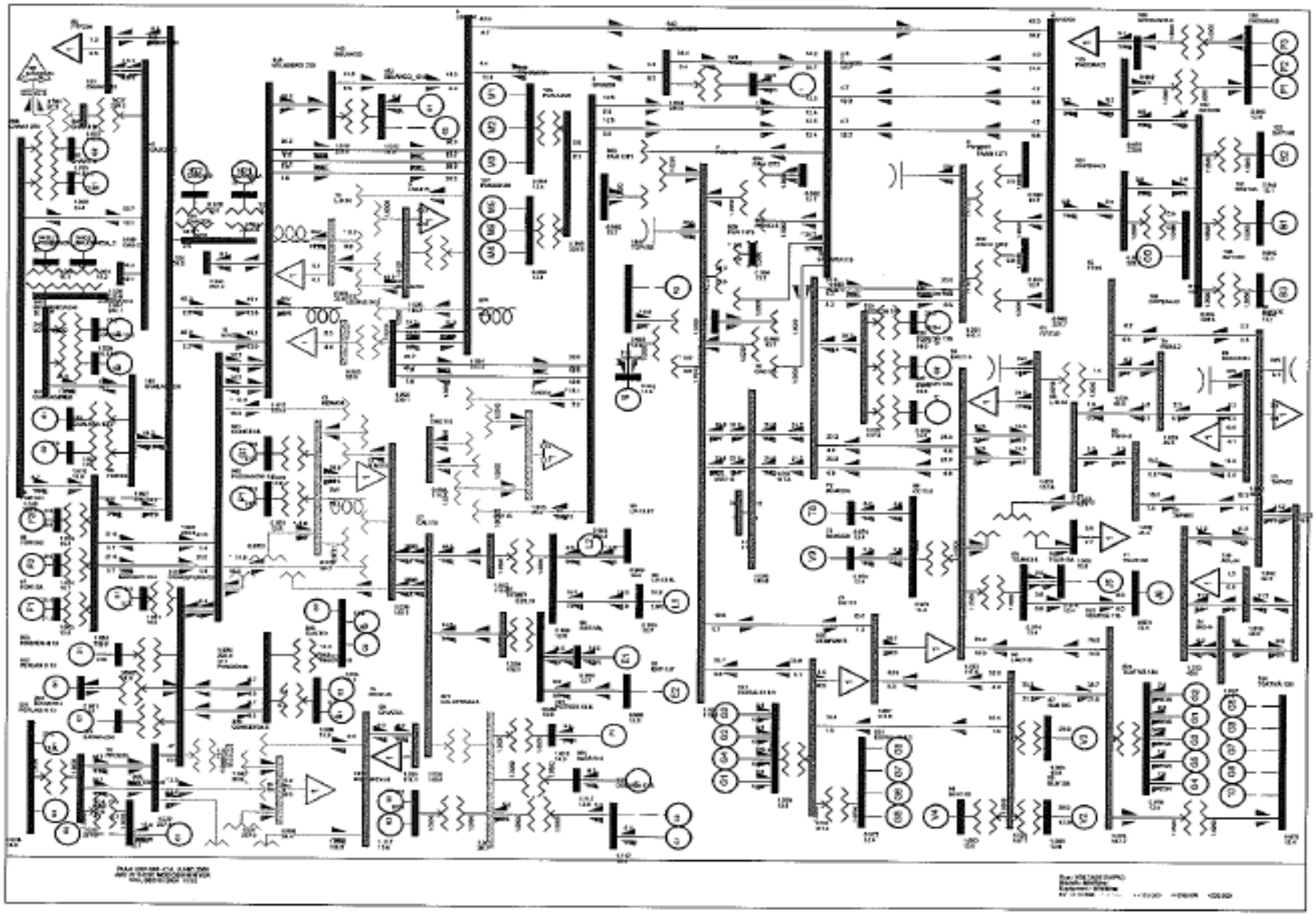
PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 11:45
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MAX VER

AREA TOTALS
IN MW/MVAR

X-- AREA	--X	FROM GENERATION	TO LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
1		1199.9	1312.2	0.0	0.0	0.0	-145.0	32.8	-145.0
GUATEMAL		59.0	349.5	-265.8	0.0	412.0	39.7	347.6	
2		913.4	902.0	0.0	0.0	0.0	0.0	11.4	0.0
SALVADOR		109.1	182.3	-58.0	0.0	219.4	38.1	166.1	
3		1009.2	985.5	0.0	0.0	0.0	0.1	23.6	0.0

HONDURAS	68.3	290.6	-187.8	0.0	301.9	-9.8	277.3	
4	536.7	527.1	0.0	0.0	0.0	0.0	9.6	0.0
NICA	41.8	224.5	-98.5	0.0	142.6	-82.9	141.4	
5	1345.1	1324.8	0.0	0.0	0.0	0.3	20.0	0.0
C.RICA	242.3	569.4	-236.5	0.0	477.8	28.3	358.9	
6	1379.8	1249.6	0.0	0.0	0.0	70.6	46.0	170.0
PANAMA	82.2	218.9	-100.7	0.0	472.4	-4.9	439.0	
7	120.4	45.2	0.0	0.0	0.0	74.1	1.1	50.0
ACANAL	14.2	7.9	0.0	0.0	0.0	-8.4	14.6	
9	0.0	13.7	0.0	0.0	0.0	0.0	0.0	-75.0
COLON	0.0	2.4	0.0	0.0	0.0	0.0	0.0	
TOTALS	6504.5	6360.1	0.0	0.0	0.0	0.0	144.4	0.0
	616.9	1845.5	-947.3	0.0	2026.1	0.0	1744.8	

Demanda Mínima de Verano



PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 11:49
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MIN VER

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
8	LSA230	230.00	6	1.0013	230.31	11	M.N230	230.00	6	1.0237	235.45
14	PRO230	230.00	6	1.0324	237.45	85	PTP230	230.00	6	1.0268	236.16
96	FOR230	230.00	6	1.0243	235.59	144	CANJ230	230.00	6	1.0245	235.63
145	BJOMIN230	230.00	6	1.0328	237.55	146	GUALACA230	230.00	6	1.0269	236.19
147	GUASQ230	230.00	6	1.0244	235.62	148	VELADERO 230	230.00	6	1.0169	233.89
149	BBLANCO	230.00	6	1.0158	233.62	190	CHANG230	230.00	6	1.0262	236.02
306	CHAN1 230	230.00	6	1.0251	235.77	310	CONCEPCION23	230.00	6	1.0305	237.02
311	PANDO230	230.00	6	1.0304	237.00	341	PRUDENCIA230	230.00	6	1.0308	237.08
345	LORENA230	230.00	6	1.0297	236.84	511	LGUIAS230	230.00	6	1.0005	230.11
540	ANTON 230	230.00	6	1.0042	230.96	6000	FRONTER	230.00	6	1.0323	237.42

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
1	PAN230	230.00	6	0.9887	227.39	3	PANII230	230.00	6	0.9902	227.74
5	CHO230	230.00	6	0.9927	228.32	100	BAY230	230.00	6	0.9935	228.51
103	COPESA23	230.00	6	0.9912	227.97	105	PAN-AM23	230.00	6	0.9927	228.32
115	PACORA23	230.00	6	0.9913	228.00	606	PAN230	230.00	6	0.9895	227.59

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 11:49
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MIN VER

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
2	PAN115	115.00	6	1.0055	115.63	4	PANII115	115.00	6	1.0012	115.14
9	LSA115	115.00	6	1.0063	115.73	12	M.N115	115.00	6	1.0285	118.28
15	PRO115	115.00	6	1.0342	118.94	18	CAC115	115.00	6	1.0053	115.61
20	CH.AZUL	115.00	6	1.0350	119.03	23	CH115	115.00	6	1.0070	115.81
33	STM115	115.00	6	1.0042	115.48	48	TINAJ115	115.00	6	1.0039	115.45
50	M.O115	115.00	6	1.0040	115.46	54	LM1115	115.00	6	1.0228	117.62
55	LM2115	115.00	6	1.0235	117.70	61	FFIELD	115.00	6	1.0213	117.45
87	CAL115	115.00	6	1.0348	119.00	88	EST115	115.00	6	1.0355	119.09
92	L.V115	115.00	6	1.0351	119.03	109	STA RITA115	115.00	6	1.0208	117.39
123	MIR115	115.00	7	1.0125	116.44	154	CEMPAN15	115.00	6	1.0208	117.40
191	CHANG115	115.00	6	1.0168	116.93	522	TCATIVÁ 115	115.00	6	1.0232	117.67
529	TCOLON 115	115.00	6	1.0252	117.90						

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)

6	CHO115	115.00	6	0.9938	114.29	19	C.V115	115.00	6	0.9967	114.62
21	C.BAN115	115.00	6	0.9982	114.79	26	LOC115	115.00	6	0.9991	114.90
30	MAR115	115.00	6	0.9987	114.86	37	SAN115	115.00	6	0.9971	114.67
52	TOC115	115.00	6	0.9993	114.92						

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 11:49
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MIN VER

AREA 6 [PANAMA] MACHINE SUMMARY:

BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
66	BLM13B	13.800	V2	28.0	12.2	25.0	0.0	1.0000	30.6	0.9164	47.0			1	6	
67	BLM13C	13.800	V3	28.0	12.2	25.0	0.0	1.0000	30.6	0.9164	47.0			1	6	
68	BLM13D	13.800	V4	28.0	12.8	25.0	0.0	1.0000	30.8	0.9097	47.0			1	6	
90	EST-13L	13.800	E1	14.5	1.5	12.0	-5.0	0.9900	14.8	0.9945	27.0			1	6	
94	LV-13.8L	13.800	L1	16.3	1.8	12.0	-5.0	0.9900	16.6	0.9942	27.0			1	6	
97	FOR13A	13.800	F1	39.4	-21.3	50.0	-50.0	1.0000	44.8	0.8803	111.0			1	6	SYST
142	CANJ13A	13.800	C1	34.0	7.6	29.0	-29.0	1.0000	34.8	0.9757	69.0			1	6	
150	GUALACA 13-2	13.800	G2	9.6	-4.1	7.4	-7.4	1.0100	10.3	0.9193	14.8			1	6	
152	BBLANCO_13.8	13.800	G1	6.6	0.0	6.1	0.0	1.0157	6.5	1.0000	11.6			1	6	
193	GEBONYIC	13.800	G1	7.3	-4.0	4.0	-4.0	1.0042	8.3	0.8777	35.3			1	6	
204	BJOMIN13	13.800	G1	22.0	-13.0	13.0	-13.0	1.0145	25.2	0.8609	28.9			1	6	
205	BAITUN13.8	13.800	G1	17.4	5.1	26.6	-26.6	0.9900	18.3	0.9592	50.6			1	6	
301	CONC13.8	13.800	G1	9.0	5.0	5.0	-5.0	0.9325	11.0	0.8742	13.5			1	6	
302	PASOANCH13.8	13.800	P1	3.3	2.0	2.0	-2.0	0.9305	4.1	0.8529	6.2			1	6	
304	ALGA13.8	13.800	A1	8.2	0.0	2.0	0.0	1.1174	7.3	1.0000	13.5			1	6	
305	ELALTO	13.800	G1	11.0	-5.0	12.0	-5.0	1.0235	11.8	0.9104	20.6			1	6	
307	CHAN1 A	13.800	G1	62.5	-22.2	50.0	-50.0	1.0000	66.3	0.9424	118.6			1	6	
312	PANDO13.8	13.800	G1	8.4	-4.8	10.0	-5.0	1.0000	9.7	0.8693	19.9			1	6	
317	MENDRE13.8	13.800	M1	6.0	0.0	0.0	0.0	1.1173	5.4	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C1	5.0	0.0	0.0	0.0	1.1174	4.5	1.0000	35.3			1	6	
324	POTRER 13.8	13.800	P1	3.5	2.0	2.0	-2.0	1.0147	4.0	0.8682	6.2			1	6	
340	PEDGALITO138	13.800	P1	15.8	9.1	12.0	-5.0	1.0100	18.1	0.8661	27.0			1	6	
342	LORENA13.8	13.800	L1	13.2	-3.1	10.5	-5.0	1.0200	13.3	0.9742	19.9			1	6	
343	PRUDENCIA_1	13.800	G1	20.6	-5.7	9.8	-9.8	1.0200	21.0	0.9641	33.0			1	6	
346	LORENA 13-2	13.800	L2	13.5	-3.0	10.5	-5.0	1.0200	13.6	0.9755	19.9			1	6	
350	MACANO 13.8	13.800	G1	3.2	-2.0	2.0	-2.0	1.0808	3.5	0.8509	6.2			1	6	
353	PORVEN N 13	13.800	G1	2.7	0.0	2.0	0.0	1.0820	2.5	1.0000	6.2			1	6	
521	EGIRAL13.8	113.800	G1	3.6	1.6	2.8	1.3	1.0000	3.9	0.9149	4.8			1	6	
521	EGIRAL13.8	113.800	G2	3.6	1.6	2.8	1.3	1.0000	3.9	0.9149	4.8			1	6	
521	EGIRAL13.8	113.800	G3	3.6	1.6	2.8	1.3	1.0000	3.9	0.9149	4.8			1	6	
521	EGIRAL13.8	113.800	G4	3.6	1.6	2.8	1.3	1.0000	3.9	0.9149	4.8			1	6	
523	TCATIVÁ 13A	13.800	G1	6.6	-0.3	6.6	-6.6	0.9700	6.8	0.9988	10.9			1	6	
523	TCATIVÁ 13A	13.800	G2	7.0	-0.3	6.6	-6.6	0.9700	7.2	0.9988	10.9			1	6	
523	TCATIVÁ 13A	13.800	G3	7.0	-0.3	6.6	-6.6	0.9700	7.2	0.9988	10.9			1	6	
523	TCATIVÁ 13A	13.800	G4	7.0	-0.3	6.6	-6.6	0.9700	7.2	0.9988	10.9			1	6	
523	TCATIVÁ 13A	13.800	G5	7.0	-0.3	6.6	-6.6	0.9700	7.2	0.9988	10.9			1	6	
525	TCOLON 13A	13.800	G1	38.3	19.3	19.3	19.3	1.0135	42.3	0.8932	44.4			1	6	
541	TOABRE	0.6000	1	30.0	0.0	0.0	0.0	1.0054	29.8	1.0000	166.7			1	6	
SUBSYSTEM TOTALS				554.4	7.3	428.4	-244.1				1182.9					

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 11:49

PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MIN VER

AREA 7 [ACANAL] MACHINE SUMMARY:

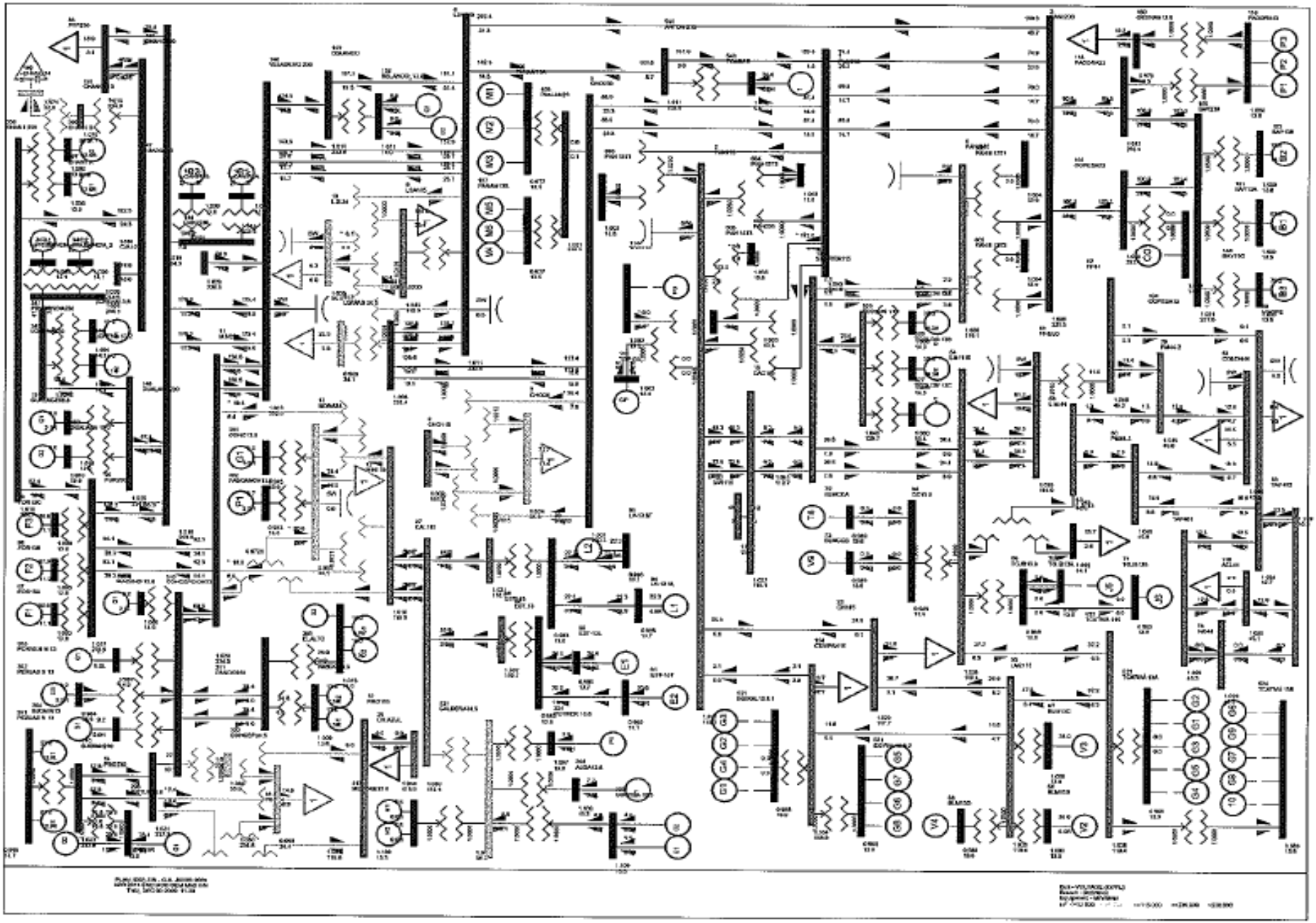
BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
129	MIR13D	13.800	G4	35.0	1.7	15.0	0.0	1.0100	34.7	0.9988	44.1			2	7	
130	MIR13F	13.800	G5	17.0	0.0	8.0	0.0	1.0189	16.7	1.0000	27.7			2	7	
140	GAT6A	6.9000	G1	1.9	-0.6	2.0	-2.0	1.0100	2.0	0.9553	4.1			2	7	
140	GAT6A	6.9000	G2	1.9	-0.6	2.0	-2.0	1.0100	2.0	0.9553	4.1			2	7	
140	GAT6A	6.9000	G3	1.9	-0.6	2.0	-2.0	1.0100	2.0	0.9553	4.1			2	7	
141	GAT6B	6.9000	G4	3.9	-1.4	3.0	-3.0	1.0100	4.1	0.9432	5.6			2	7	
141	GAT6B	6.9000	G5	3.9	-1.4	3.0	-3.0	1.0100	4.1	0.9432	6.2			2	7	
141	GAT6B	6.9000	G6	3.9	-1.4	3.0	-3.0	1.0100	4.1	0.9432	6.2			2	7	
170	MIR13G	13.800	M1	17.0	6.8	11.2	6.8	1.0332	17.7	0.9281	23.0			2	7	
171	MIR13H	13.800	M1	17.0	6.8	11.2	6.8	1.0423	17.6	0.9281	23.0			2	7	
171	MIR13H	13.800	M2	17.0	6.8	11.2	6.8	1.0423	17.6	0.9281	23.0			2	7	
SUBSYSTEM TOTALS				120.4	16.3	71.5	5.5				171.3					

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 11:49
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MIN VER

AREA TOTALS
IN MW/MVAR

X-- AREA --X	FROM GENERATION	TO LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
1	1199.9	1312.2	0.0	0.0	0.0	-145.0	32.8	-145.0
GUATEMAL	59.0	349.5	-265.8	0.0	412.0	39.7	347.6	
2	913.4	902.0	0.0	0.0	0.0	0.0	11.4	0.0
SALVADOR	109.0	182.3	-58.0	0.0	219.4	38.1	166.1	
3	1009.2	985.5	0.0	0.0	0.0	0.1	23.6	0.0
HONDURAS	68.2	290.6	-187.9	0.0	301.9	-9.9	277.3	
4	536.7	527.1	0.0	0.0	0.0	0.0	9.6	0.0
NICA	41.8	224.5	-98.5	0.0	142.6	-83.0	141.4	
5	1345.1	1324.8	0.0	0.0	0.0	0.8	19.5	0.0
C.RICA	236.2	569.4	-236.7	0.0	478.2	26.2	355.4	
6	554.4	499.8	0.0	0.0	0.0	43.2	5.9	170.0
PANAMA	7.3	242.1	155.8	0.0	471.7	0.4	78.0	
7	120.4	18.1	0.0	0.0	0.0	101.0	1.4	50.0
ACANAL	16.3	8.8	0.0	0.0	0.0	-11.5	19.0	
9	0.0	5.5	0.0	0.0	0.0	0.0	0.0	-75.0
COLON	0.0	2.7	0.0	0.0	0.0	0.0	0.0	
TOTALS	5679.1	5575.0	0.0	0.0	0.0	0.0	104.2	0.0
	537.8	1869.8	-691.1	0.0	2025.7	0.0	1384.8	

Demanda Máxima de Invierno



PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 11:36
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MAX INV

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
1	PAN230	230.00	6	1.0025	230.58	3	PANII230	230.00	6	1.0063	231.46
5	CHO230	230.00	6	1.0011	230.25	8	LSA230	230.00	6	1.0111	232.55
11	M.N230	230.00	6	1.0197	234.52	14	PRO230	230.00	6	1.0315	237.24
85	PTP230	230.00	6	1.0176	234.04	96	FOR230	230.00	6	1.0169	233.89
100	BAY230	230.00	6	1.0305	237.02	103	COPESA23	230.00	6	1.0103	232.37
105	PAN-AM23	230.00	6	1.0011	230.25	115	PACORA23	230.00	6	1.0126	232.89
144	CANJ230	230.00	6	1.0156	233.59	145	BJOMIN230	230.00	6	1.0332	237.64
146	GUALACA230	230.00	6	1.0197	234.53	147	GUASQ230	230.00	6	1.0155	233.57
148	VELADERO 230	230.00	6	1.0125	232.88	149	BBLANCO	230.00	6	1.0113	232.60
190	CHANG230	230.00	6	1.0186	234.27	306	CHAN1 230	230.00	6	1.0178	234.09
310	CONCEPCION23	230.00	6	1.0296	236.80	311	PANDO230	230.00	6	1.0293	236.74
341	PRUDENCIA230	230.00	6	1.0264	236.07	345	LORENA230	230.00	6	1.0241	235.54
511	LGUIAS230	230.00	6	1.0060	231.39	540	ANTON 230	230.00	6	1.0112	232.57
6000	FRONTER	230.00	6	1.0308	237.08						

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)

* NONE *

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 11:36
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MAX INV

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
2	PAN115	115.00	6	1.0272	118.13	4	PANII115	115.00	6	1.0358	119.12
6	CHO115	115.00	6	1.0023	115.27	9	LSA115	115.00	6	1.0429	119.94
12	M.N115	115.00	6	1.0163	116.88	15	PRO115	115.00	6	1.0333	118.83
18	CAC115	115.00	6	1.0269	118.09	19	C.V115	115.00	6	1.0253	117.91
20	CH.AZUL	115.00	6	1.0341	118.92	21	C.BAN115	115.00	6	1.0185	117.13
23	CH115	115.00	6	1.0234	117.69	26	LOC115	115.00	6	1.0193	117.22
30	MAR115	115.00	6	1.0179	117.06	33	STM115	115.00	6	1.0254	117.92
37	SAN115	115.00	6	1.0178	117.05	48	TINAJ115	115.00	6	1.0249	117.87
50	M.O115	115.00	6	1.0251	117.88	52	TOC115	115.00	6	1.0332	118.81
54	LM1115	115.00	6	1.0381	119.38	55	LM2115	115.00	6	1.0384	119.41
61	FFIELD	115.00	6	1.0350	119.03	87	CAL115	115.00	6	1.0296	118.41
88	EST115	115.00	6	1.0319	118.66	92	L.V115	115.00	6	1.0307	118.53
109	STA RITA115	115.00	6	1.0409	119.70	123	MIR115	115.00	7	1.0323	118.72
154	CEMPAN15	115.00	6	1.0342	118.93	191	CHANG115	115.00	6	1.0099	116.14
522	TCATIVÁ 115	115.00	6	1.0382	119.39	529	TCOLON 115	115.00	6	1.0495	120.69

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME --X	BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --X	BASKV	AREA	V(PU)	V(KV)

* NONE *

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 11:36
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MAX INV

AREA 6 [PANAMA] MACHINE SUMMARY:

BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
66	BLM13B	13.800	V2	38.0	6.6	25.0	0.0	1.0000	38.6	0.9852	47.0			1	6	
67	BLM13C	13.800	V3	38.0	6.6	25.0	0.0	1.0000	38.6	0.9852	47.0			1	6	
90	EST-13L	13.800	E1	20.0	2.9	12.0	-5.0	0.9900	20.4	0.9899	27.0			1	6	
91	EST-13T	13.800	E2	20.0	2.9	12.0	-5.0	0.9900	20.4	0.9899	27.0			1	6	
94	LV-13.8L	13.800	L1	22.3	4.9	12.0	-5.0	0.9950	22.9	0.9768	27.0			1	6	
95	LV-13.8T	13.800	L2	22.3	4.9	12.0	-5.0	0.9950	22.9	0.9768	27.0			1	6	
97	FOR13A	13.800	F1	88.6	-11.1	50.0	-50.0	1.0000	89.3	0.9922	111.0			1	6	
98	FOR13B	13.800	F2	87.9	-11.2	50.0	-50.0	1.0000	88.6	0.9920	111.0			1	6	
99	FOR13C	13.800	F3	88.6	-11.1	50.0	-50.0	1.0000	89.3	0.9922	111.0			1	6	
101	BAY13A	13.800	B1	57.8	16.7	50.0	-25.0	1.0000	60.2	0.9607	96.0			1	6	SYST
102	BAY13B	13.800	B2	75.6	18.3	50.0	-25.0	1.0000	77.8	0.9721	96.0			1	6	
108	BAY13C	13.800	B3	75.2	18.2	50.0	-25.0	1.0000	77.4	0.9719	100.0			1	6	
142	CANJ13A	13.800	C1	52.0	14.1	29.0	-29.0	1.0000	53.9	0.9650	69.0			1	6	
143	CANJ13B	13.800	C2	52.0	14.1	29.0	-29.0	1.0000	53.9	0.9650	69.0			1	6	
150	GUALACA 13-2	13.800	G2	9.6	-2.3	7.4	-7.4	1.0100	9.7	0.9730	14.8			1	6	
151	GUALACA13.8	13.800	G1	9.5	-2.3	7.4	-7.4	1.0100	9.6	0.9724	14.8			1	6	
152	BBLANCO_13.8	13.800	G1	6.6	0.0	6.1	0.0	1.0112	6.6	1.0000	11.6			1	6	
152	BBLANCO_13.8	13.800	G2	6.6	0.0	6.1	0.0	1.0112	6.6	1.0000	11.6			1	6	
193	GEBONYIC	13.800	G1	7.3	-1.5	4.0	-4.0	1.0000	7.5	0.9809	35.3			1	6	
193	GEBONYIC	13.800	G2	7.1	-1.4	4.0	-4.0	1.0000	7.3	0.9809	35.3			1	6	
204	BJOMIN13	13.800	G1	22.6	-13.0	13.0	-13.0	0.9950	26.2	0.8670	28.9			1	6	
204	BJOMIN13	13.800	G2	22.2	-12.9	13.0	-13.0	0.9950	25.8	0.8647	28.9			1	6	
205	BAITUN13.8	13.800	G1	35.4	11.9	26.6	-26.6	1.0100	37.0	0.9480	50.6			1	6	
205	BAITUN13.8	13.800	G2	35.4	11.9	26.6	-26.6	1.0100	37.0	0.9480	50.6			1	6	
301	CONC13.8	13.800	G1	9.0	5.0	5.0	-5.0	0.9449	10.9	0.8742	13.5			1	6	
302	PASOANCH13.8	13.800	P1	3.7	2.0	2.0	-2.0	0.9431	4.5	0.8823	6.2			1	6	
304	ALGA13.8	13.800	A1	7.2	0.0	2.0	0.0	1.1090	6.5	1.0000	13.5			1	6	
305	ELALTO	13.800	G1	14.0	-5.0	12.0	-5.0	1.0148	14.6	0.9417	20.6			1	6	
305	ELALTO	13.800	G2	14.0	-5.0	12.0	-5.0	1.0148	14.6	0.9414	20.6			1	6	
307	CHAN1 A	13.800	G1	90.6	-12.9	50.0	-50.0	1.0000	91.5	0.9900	118.6			1	6	
308	CHAN1 B	13.800	G2	90.2	-12.9	50.0	-50.0	1.0000	91.2	0.9899	118.6			1	6	
312	PANDO13.8	13.800	G1	12.4	-1.5	10.0	-5.0	1.0000	12.5	0.9929	19.9			1	6	
312	PANDO13.8	13.800	G2	12.4	-1.5	10.0	-5.0	1.0000	12.5	0.9929	19.9			1	6	
317	MENDRE13.8	13.800	M1	7.6	0.0	0.0	0.0	1.1085	6.9	1.0000	35.3			1	6	
317	MENDRE13.8	13.800	M2	7.6	0.0	0.0	0.0	1.1085	6.9	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C1	4.4	0.0	0.0	0.0	1.1088	4.0	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C2	4.4	0.0	0.0	0.0	1.1088	4.0	1.0000	35.3			1	6	
324	POTRER 13.8	13.800	P1	3.6	2.0	2.0	-2.0	1.0071	4.1	0.8759	6.2			1	6	
340	PEDGALITO138	13.800	P1	19.8	9.7	12.0	-5.0	1.0100	21.8	0.8991	27.0			1	6	

342	LORENA13.8	13.800	L1	13.2	-1.1	10.5	-5.0	1.0200	13.0	0.9963	19.9		1	6
343	PRUDENCIA_1	13.800	G1	20.6	-3.2	9.8	-9.8	1.0200	20.5	0.9881	33.0		1	6
344	PRUDENCIA_2	13.800	G2	20.6	-3.2	9.8	-9.8	1.0200	20.5	0.9881	33.0		1	6
346	LORENA 13-2	13.800	L2	14.0	-1.1	10.5	-5.0	1.0200	13.8	0.9969	19.9		1	6
350	MACANO 13.8	13.800	G1	3.2	-2.0	2.0	-2.0	1.0798	3.5	0.8509	6.2		1	6
351	PERLAS N 13	13.800	G1	9.2	5.0	5.0	-5.0	0.9836	10.7	0.8791	13.5		1	6
352	PERLAS S 13	13.800	G1	9.2	5.0	5.0	-5.0	0.9836	10.7	0.8791	13.5		1	6
353	PORVEN N 13	13.800	G1	2.7	0.0	2.0	0.0	1.0810	2.5	1.0000	6.2		1	6
525	TCOLON 13A	13.800	G1	38.3	19.3	19.3	19.3	1.0360	41.4	0.8932	44.4		1	6
526	TCOLON 13B	13.800	G2	38.3	19.3	19.3	19.3	1.0360	41.4	0.8932	44.4		1	6
541	TOABRE	0.6000	1	30.0	0.0	0.0	0.0	1.0124	29.6	1.0000	166.7		1	6
SUBSYSTEM TOTALS				1401.1	85.0	830.5	-542.1				2174.3			

AREA 7 [ACANAL] MACHINE SUMMARY:

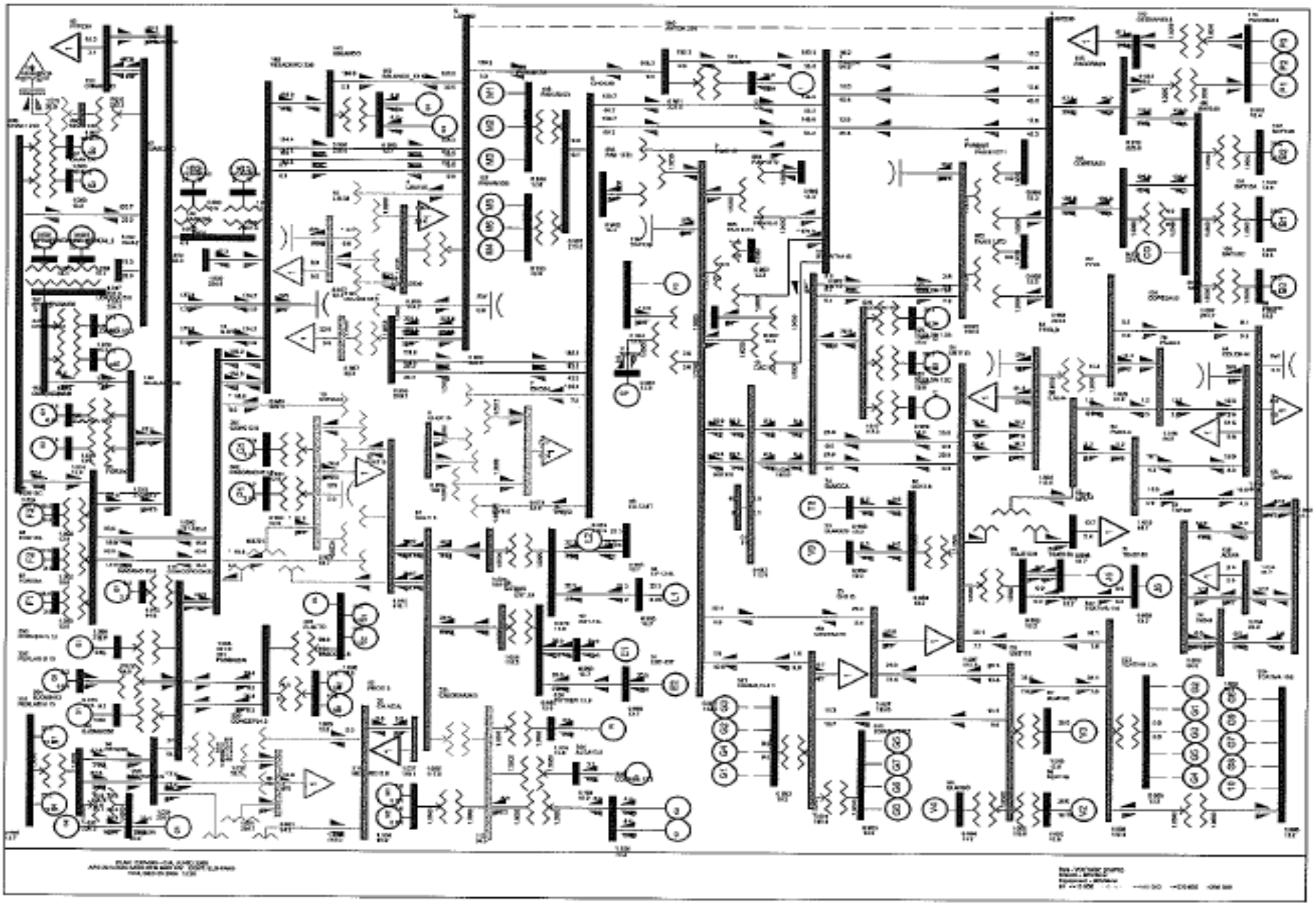
BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
129	MIR13D	13.800	G4	35.0	0.0	15.0	0.0	1.0246	34.2	1.0000	44.1			2	7	
130	MIR13F	13.800	G5	17.0	0.0	8.0	0.0	1.0381	16.4	1.0000	27.7			2	7	
140	GAT6A	6.9000	G1	1.9	-0.9	2.0	-2.0	1.0100	2.1	0.8988	4.1			2	7	
140	GAT6A	6.9000	G2	1.9	-0.9	2.0	-2.0	1.0100	2.1	0.8988	4.1			2	7	
140	GAT6A	6.9000	G3	1.9	-0.9	2.0	-2.0	1.0100	2.1	0.8988	4.1			2	7	
141	GAT6B	6.9000	G4	3.9	-1.7	3.0	-3.0	1.0100	4.2	0.9143	5.6			2	7	
141	GAT6B	6.9000	G5	3.9	-1.7	3.0	-3.0	1.0100	4.2	0.9143	6.2			2	7	
141	GAT6B	6.9000	G6	3.9	-1.7	3.0	-3.0	1.0100	4.2	0.9143	6.2			2	7	
170	MIR13G	13.800	M1	17.0	6.8	11.2	6.8	1.0522	17.4	0.9281	23.0			2	7	
171	MIR13H	13.800	M1	17.0	6.8	11.2	6.8	1.0611	17.3	0.9281	23.0			2	7	
171	MIR13H	13.800	M2	17.0	6.8	11.2	6.8	1.0611	17.3	0.9281	23.0			2	7	
SUBSYSTEM TOTALS				120.4	12.5	71.5	5.5				171.3					

AREA TOTALS
IN MW/MVAR

X-- AREA --X	FROM GENERATION	TO LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
1	1199.9	1312.2	0.0	0.0	0.0	-145.0	32.8	-145.0
GUATEMAL	59.0	349.5	-265.8	0.0	412.0	39.7	347.6	
2	913.4	902.0	0.0	0.0	0.0	0.0	11.4	0.0
SALVADOR	109.1	182.3	-58.0	0.0	219.4	38.1	166.1	
3	1009.2	985.5	0.0	0.0	0.0	0.1	23.6	0.0
HONDURAS	68.3	290.6	-187.8	0.0	301.9	-9.8	277.3	
4	536.7	527.1	0.0	0.0	0.0	0.0	9.6	0.0
NICA	41.9	224.5	-98.5	0.0	142.6	-82.8	141.4	

5	1345.1	1324.8	0.0	0.0	0.0	-0.1	20.4	0.0
C.RICA	246.2	569.4	-236.3	0.0	477.3	29.5	361.0	
6	1401.1	1249.6	0.0	0.0	0.0	71.1	66.8	170.0
PANAMA	85.0	218.9	-265.7	0.0	475.5	-4.9	609.8	
7	120.4	45.2	0.0	0.0	0.0	73.9	1.2	50.0
ACANAL	12.5	7.9	0.0	0.0	0.0	-9.6	14.2	
9	0.0	13.7	0.0	0.0	0.0	0.0	0.0	-75.0
COLON	0.0	2.4	0.0	0.0	0.0	0.0	0.0	
TOTALS	6525.8	6360.1	0.0	0.0	0.0	0.0	165.8	0.0
	622.0	1845.5	-1112.1	0.0	2028.7	0.0	1917.3	

Contingencia Llano Sánchez – Panamá II



PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 11:54
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MAX INV CONT. LLS-PANII

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
11	M.N230	230.00	6	1.0082	231.88	14	PRO230	230.00	6	1.0241	235.55
85	PTP230	230.00	6	1.0096	232.20	96	FOR230	230.00	6	1.0085	231.96
100	BAY230	230.00	6	1.0073	231.68	144	CANJ230	230.00	6	1.0058	231.33
145	BJOMIN230	230.00	6	1.0271	236.24	146	GUALACA230	230.00	6	1.0104	232.40
147	GUASQ230	230.00	6	1.0056	231.29	190	CHANG230	230.00	6	1.0145	233.33
306	CHAN1 230	230.00	6	1.0141	233.24	310	CONCEPCION23	230.00	6	1.0206	234.73
311	PANDO230	230.00	6	1.0205	234.72	341	PRUDENCIA230	230.00	6	1.0181	234.16
345	LORENA230	230.00	6	1.0155	233.56	6000	FRONTER	230.00	6	1.0232	235.34

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
1	PAN230	230.00	6	0.9616	221.17	3	PANII230	230.00	6	0.9678	222.59
5	CHO230	230.00	6	0.9533	219.27	8	LSA230	230.00	6	0.9679	222.61
103	COPESA23	230.00	6	0.9740	224.02	105	PAN-AM23	230.00	6	0.9533	219.27
115	PACORA23	230.00	6	0.9782	224.99	148	VELADERO 230	230.00	6	0.9884	227.34
149	BBLANCO	230.00	6	0.9859	226.76	511	LGUIAS230	230.00	6	0.9551	219.68
540	ANTON 230	230.00	6	0.9608	220.99						

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 11:54
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MAX INV CONT. LLS-PANII

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
12	M.N115	115.00	6	1.0096	116.10	15	PRO115	115.00	6	1.0260	117.99
20	CH.AZUL	115.00	6	1.0267	118.07	54	LM1115	115.00	6	1.0074	115.85
55	LM2115	115.00	6	1.0078	115.90	61	FFIELD	115.00	6	1.0044	115.51
87	CAL115	115.00	6	1.0251	117.89	88	EST115	115.00	6	1.0278	118.20
92	L.V115	115.00	6	1.0264	118.03	109	STA RITA115	115.00	6	1.0084	115.96
154	CEMPAN15	115.00	6	1.0008	115.09	191	CHANG115	115.00	6	1.0070	115.81
522	TCATIVÁ 115	115.00	6	1.0076	115.87	529	TCOLON 115	115.00	6	1.0172	116.98

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
2	PAN115	115.00	6	0.9870	113.51	4	PANII115	115.00	6	0.9966	114.61
6	CHO115	115.00	6	0.9546	109.78	9	LSA115	115.00	6	0.9976	114.72
18	CAC115	115.00	6	0.9868	113.49	19	C.V115	115.00	6	0.9856	113.34
21	C.BAN115	115.00	6	0.9780	112.47	23	CH115	115.00	6	0.9868	113.49
26	LOC115	115.00	6	0.9788	112.56	30	MAR115	115.00	6	0.9774	112.40

33	STM115	115.00	6	0.9851	113.29	37	SAN115	115.00	6	0.9774	112.40		
48	TINAJ115	115.00	6	0.9846	113.23	50	M.O115	115.00	6	0.9847	113.24		
52	TOC115	115.00	6	0.9939	114.30	123	MIR115	115.00	7	0.9948	114.40		

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 11:54
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MAX INV CONT. LLS-PANII

AREA 6 [PANAMA] MACHINE SUMMARY:

BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
66	BLM13B	13.800	V2	38.0	19.7	25.0	0.0	1.0000	42.8	0.8875	47.0			1	6	
67	BLM13C	13.800	V3	38.0	19.7	25.0	0.0	1.0000	42.8	0.8875	47.0			1	6	
90	EST-13L	13.800	E1	20.0	4.0	12.0	-5.0	0.9900	20.6	0.9802	27.0			1	6	
91	EST-13T	13.800	E2	20.0	4.0	12.0	-5.0	0.9900	20.6	0.9802	27.0			1	6	
94	LV-13.8L	13.800	L1	22.3	6.2	12.0	-5.0	0.9950	23.2	0.9640	27.0			1	6	
95	LV-13.8T	13.800	L2	22.3	6.2	12.0	-5.0	0.9950	23.2	0.9640	27.0			1	6	
97	FOR13A	13.800	F1	88.6	-3.5	50.0	-50.0	1.0000	88.6	0.9992	111.0			1	6	
98	FOR13B	13.800	F2	87.9	-3.5	50.0	-50.0	1.0000	88.0	0.9992	111.0			1	6	
99	FOR13C	13.800	F3	88.6	-3.4	50.0	-50.0	1.0000	88.7	0.9992	111.0			1	6	
101	BAY13A	13.800	B1	72.0	35.3	50.0	-25.0	1.0000	80.1	0.8979	96.0			1	6	SYST
102	BAY13B	13.800	B2	75.6	35.6	50.0	-25.0	1.0000	83.6	0.9046	96.0			1	6	
108	BAY13C	13.800	B3	75.2	35.6	50.0	-25.0	1.0000	83.2	0.9039	100.0			1	6	
142	CANJ13A	13.800	C1	52.0	15.8	29.0	-29.0	1.0000	54.3	0.9570	69.0			1	6	
143	CANJ13B	13.800	C2	52.0	15.8	29.0	-29.0	1.0000	54.3	0.9570	69.0			1	6	
150	GUALACA 13-2	13.800	G2	9.6	0.1	7.4	-7.4	1.0100	9.5	1.0000	14.8			1	6	
151	GUALACA13.8	13.800	G1	9.5	0.1	7.4	-7.4	1.0100	9.4	1.0000	14.8			1	6	
152	BBLANCO_13.8	13.800	G1	6.6	1.7	6.1	0.0	0.9900	6.9	0.9687	11.6			1	6	
152	BBLANCO_13.8	13.800	G2	6.6	1.7	6.1	0.0	0.9900	6.9	0.9687	11.6			1	6	
193	GEBONYIC	13.800	G1	7.3	-1.0	4.0	-4.0	1.0000	7.4	0.9911	35.3			1	6	
193	GEBONYIC	13.800	G2	7.1	-1.0	4.0	-4.0	1.0000	7.2	0.9911	35.3			1	6	
204	BJOMIN13	13.800	G1	22.6	-10.9	13.0	-13.0	0.9950	25.2	0.9012	28.9			1	6	
204	BJOMIN13	13.800	G2	22.2	-10.7	13.0	-13.0	0.9950	24.7	0.9012	28.9			1	6	
205	BAITUN13.8	13.800	G1	35.4	14.2	26.6	-26.6	1.0100	37.8	0.9283	50.6			1	6	
205	BAITUN13.8	13.800	G2	35.4	14.2	26.6	-26.6	1.0100	37.8	0.9283	50.6			1	6	
301	CONC13.8	13.800	G1	9.0	5.0	5.0	-5.0	0.9341	11.0	0.8742	13.5			1	6	
302	PASOANCH13.8	13.800	P1	3.7	2.0	2.0	-2.0	0.9322	4.6	0.8823	6.2			1	6	
304	ALGA13.8	13.800	A1	7.2	0.0	2.0	0.0	1.1041	6.5	1.0000	13.5			1	6	
305	ELALTO	13.800	G1	14.0	-5.0	12.0	-5.0	1.0059	14.8	0.9417	20.6			1	6	
305	ELALTO	13.800	G2	14.0	-5.0	12.0	-5.0	1.0059	14.7	0.9414	20.6			1	6	
307	CHAN1 A	13.800	G1	90.6	-9.3	50.0	-50.0	1.0000	91.0	0.9947	118.6			1	6	
308	CHAN1 B	13.800	G2	90.2	-9.4	50.0	-50.0	1.0000	90.7	0.9947	118.6			1	6	
312	PANDO13.8	13.800	G1	12.4	-0.8	10.0	-5.0	1.0000	12.4	0.9981	19.9			1	6	
312	PANDO13.8	13.800	G2	12.4	-0.8	10.0	-5.0	1.0000	12.4	0.9981	19.9			1	6	
317	MENDRE13.8	13.800	M1	7.6	0.0	0.0	0.0	1.1036	6.9	1.0000	35.3			1	6	
317	MENDRE13.8	13.800	M2	7.6	0.0	0.0	0.0	1.1036	6.9	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C1	4.4	0.0	0.0	0.0	1.1039	4.0	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C2	4.4	0.0	0.0	0.0	1.1039	4.0	1.0000	35.3			1	6	
324	POTRER 13.8	13.800	P1	3.6	2.0	2.0	-2.0	1.0026	4.1	0.8759	6.2			1	6	
340	PEDGALITO138	13.800	P1	19.8	11.8	12.0	-5.0	1.0100	22.8	0.8594	27.0			1	6	
342	LORENA13.8	13.800	L1	13.2	1.8	10.5	-5.0	1.0200	13.1	0.9910	19.9			1	6	
343	PRUDENCIA_1	13.800	G1	20.6	1.4	9.8	-9.8	1.0200	20.3	0.9976	33.0			1	6	
344	PRUDENCIA_2	13.800	G2	20.6	1.4	9.8	-9.8	1.0200	20.3	0.9976	33.0			1	6	
346	LORENA 13-2	13.800	L2	14.0	1.8	10.5	-5.0	1.0200	13.8	0.9917	19.9			1	6	

350	MACANO	13.8	13.800	G1	3.2	-2.0	2.0	-2.0	1.0704	3.6	0.8509	6.2		1	6
351	PERLAS N	13	13.800	G1	9.2	5.0	5.0	-5.0	0.9750	10.8	0.8791	13.5		1	6
352	PERLAS S	13	13.800	G1	9.2	5.0	5.0	-5.0	0.9750	10.8	0.8791	13.5		1	6
353	PORVEN N	13	13.800	G1	2.7	0.0	2.0	0.0	1.0716	2.5	1.0000	6.2		1	6
525	TCOLON 13A		13.800	G1	38.3	19.3	19.3	19.3	1.0061	42.6	0.8932	44.4		1	6
526	TCOLON 13B		13.800	G2	38.3	19.3	19.3	19.3	1.0061	42.6	0.8932	44.4		1	6
541	TOABRE		0.6000	1	30.0	0.0	0.0	0.0	0.9621	31.2	1.0000	166.7		1	6
SUBSYSTEM TOTALS					1415.2	239.5	830.5	-542.1				2174.3			

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 11:54
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MAX INV CONT. LLS-PANII

AREA 7 [ACANAL] MACHINE SUMMARY:

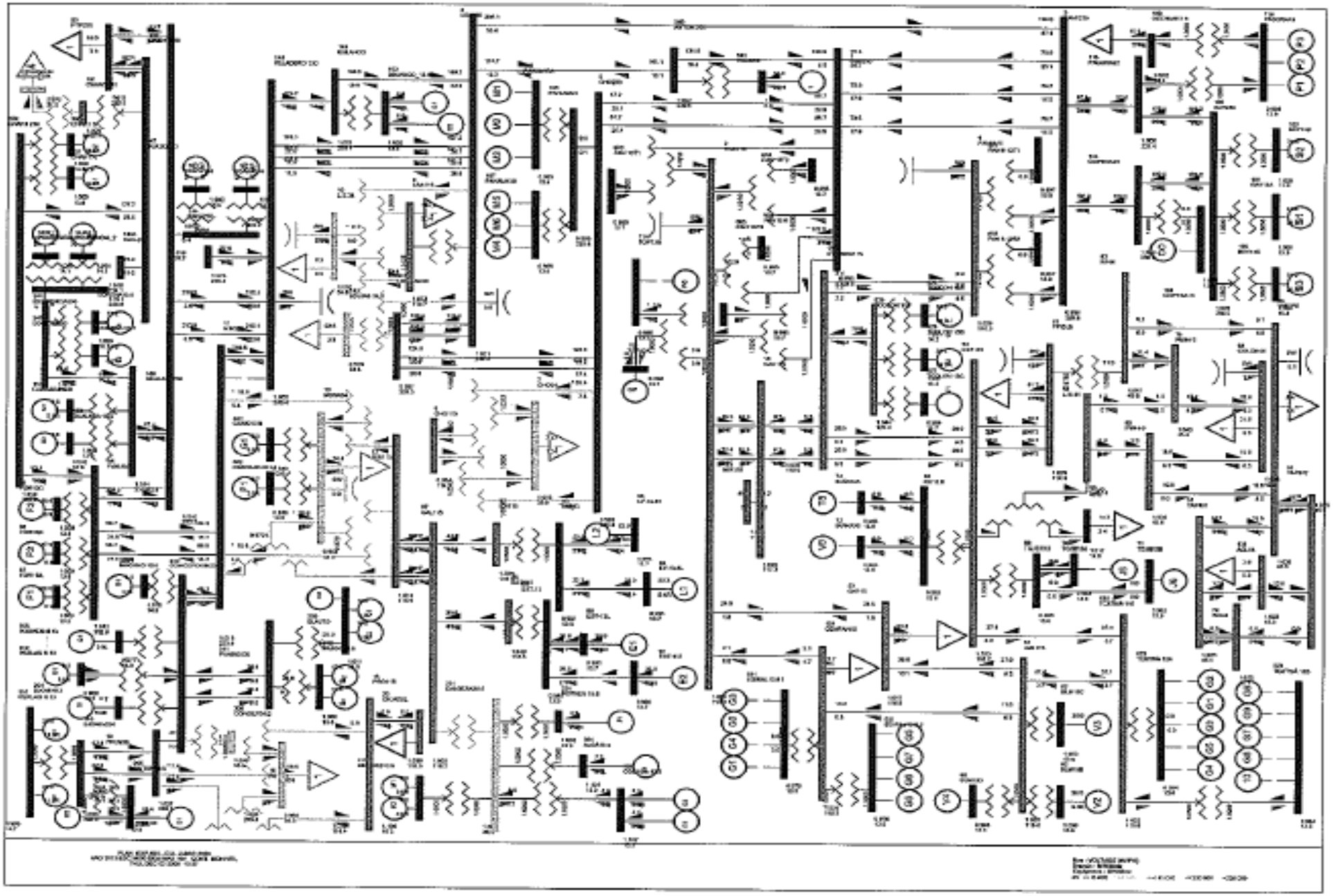
BUS#	X-- NAME	--X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
129	MIR13D		13.800	G4	35.0	5.3	15.0	0.0	1.0100	35.1	0.9886	44.1			2	7	
130	MIR13F		13.800	G5	17.0	0.0	8.0	0.0	1.0100	16.8	1.0000	27.7			2	7	
140	GAT6A		6.9000	G1	1.9	0.1	2.0	-2.0	1.0100	1.9	0.9995	4.1			2	7	
140	GAT6A		6.9000	G2	1.9	0.1	2.0	-2.0	1.0100	1.9	0.9995	4.1			2	7	
140	GAT6A		6.9000	G3	1.9	0.1	2.0	-2.0	1.0100	1.9	0.9995	4.1			2	7	
141	GAT6B		6.9000	G4	3.9	-0.7	3.0	-3.0	1.0100	3.9	0.9845	5.6			2	7	
141	GAT6B		6.9000	G5	3.9	-0.7	3.0	-3.0	1.0100	3.9	0.9845	6.2			2	7	
141	GAT6B		6.9000	G6	3.9	-0.7	3.0	-3.0	1.0100	3.9	0.9845	6.2			2	7	
170	MIR13G		13.800	M1	17.0	6.8	11.2	6.8	1.0244	17.9	0.9281	23.0			2	7	
171	MIR13H		13.800	M1	17.0	6.8	11.2	6.8	1.0335	17.7	0.9281	23.0			2	7	
171	MIR13H		13.800	M2	17.0	6.8	11.2	6.8	1.0335	17.7	0.9281	23.0			2	7	
SUBSYSTEM TOTALS					120.4	23.9	71.5	5.5				171.3					

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 11:54
PLAN. EXP-SIN - C.A. JUNIO 2009 AREA TOTALS
AñO 2013 ESC MOD DEM MAX INV CONT. LLS-PANII IN MW/MVAR

X-- AREA	--X	FROM GENERATION	TO LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
1		1199.9	1312.2	0.0	0.0	0.0	-145.0	32.8	-145.0
GUATEMAL		59.0	349.5	-265.8	0.0	412.0	39.7	347.6	
2		913.4	902.0	0.0	0.0	0.0	0.0	11.4	0.0
SALVADOR		109.1	182.3	-58.0	0.0	219.4	38.1	166.1	
3		1009.2	985.5	0.0	0.0	0.0	0.1	23.6	0.0
HONDURAS		68.4	290.6	-187.8	0.0	301.8	-9.8	277.3	
4		536.7	527.1	0.0	0.0	0.0	0.0	9.6	0.0
NICA		42.3	224.5	-98.5	0.0	142.6	-82.6	141.4	
5		1345.1	1324.8	0.0	0.0	0.0	-0.1	20.4	0.0
C.RICA		258.6	569.4	-235.7	0.0	475.9	38.9	361.9	
6		1415.2	1249.6	0.0	0.0	0.0	71.2	80.8	170.0

PANAMA	239.5	218.9	-245.4	0.0	426.4	-25.4	715.4	
7	120.4	45.2	0.0	0.0	0.0	73.9	1.3	50.0
ACANAL	23.9	7.9	0.0	0.0	0.0	1.1	14.9	
9	0.0	13.7	0.0	0.0	0.0	0.0	0.0	-75.0
COLON	0.0	2.4	0.0	0.0	0.0	0.0	0.0	
TOTALS	6540.0	6360.1	0.0	0.0	0.0	0.0	179.9	0.0
	800.8	1845.5	-1091.3	0.0	1978.1	0.0	2024.6	

Contingencia Mata de Nance - Veladero



PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 13:25
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MAX INV CONT. MDN-VEL

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
8	LSA230	230.00	6	1.0012	230.27	11	M.N230	230.00	6	1.0148	233.41
14	PRO230	230.00	6	1.0274	236.31	85	PTP230	230.00	6	1.0126	232.91
96	FOR230	230.00	6	1.0122	232.82	100	BAY230	230.00	6	1.0263	236.04
103	COPESA23	230.00	6	1.0037	230.84	115	PACORA23	230.00	6	1.0063	231.45
144	CANJ230	230.00	6	1.0096	232.22	145	BJOMIN230	230.00	6	1.0299	236.87
146	GUALACA230	230.00	6	1.0141	233.24	147	GUASQ230	230.00	6	1.0095	232.19
148	VELADERO 230	230.00	6	1.0018	230.41	149	BBLANCO	230.00	6	1.0006	230.14
190	CHANG230	230.00	6	1.0161	233.69	306	CHAN1 230	230.00	6	1.0156	233.58
310	CONCEPCION23	230.00	6	1.0253	235.83	311	PANDO230	230.00	6	1.0252	235.79
341	PRUDENCIA230	230.00	6	1.0214	234.91	345	LORENA230	230.00	6	1.0189	234.34
540	ANTON 230	230.00	6	1.0020	230.46	6000	FRONTER	230.00	6	1.0264	236.07

BUSES WITH VOLTAGE LESS THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
1	PAN230	230.00	6	0.9953	228.91	3	PANII230	230.00	6	0.9993	229.83
5	CHO230	230.00	6	0.9931	228.42	105	PAN-AM23	230.00	6	0.9931	228.42
511	LGUIAS230	230.00	6	0.9968	229.26						

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 13:25
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MAX INV CONT. MDN-VEL

BUSES WITH VOLTAGE GREATER THAN 1.0000:

BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)	BUS#	X-- NAME --	X BASKV	AREA	V(PU)	V(KV)
2	PAN115	115.00	6	1.0200	117.30	4	PANII115	115.00	6	1.0287	118.30
9	LSA115	115.00	6	1.0325	118.74	12	M.N115	115.00	6	1.0135	116.55
15	PRO115	115.00	6	1.0293	118.37	18	CAC115	115.00	6	1.0197	117.26
19	C.V115	115.00	6	1.0182	117.09	20	CH.AZUL	115.00	6	1.0300	118.46
21	C.BAN115	115.00	6	1.0112	116.29	23	CH115	115.00	6	1.0168	116.93
26	LOC115	115.00	6	1.0120	116.38	30	MAR115	115.00	6	1.0106	116.22
33	STM115	115.00	6	1.0181	117.09	37	SAN115	115.00	6	1.0105	116.21
48	TINAJ115	115.00	6	1.0177	117.03	50	M.O115	115.00	6	1.0178	117.05
52	TOC115	115.00	6	1.0260	117.99	54	LM1115	115.00	6	1.0325	118.74
55	LM2115	115.00	6	1.0328	118.78	61	FFIELD	115.00	6	1.0295	118.39
87	CAL115	115.00	6	1.0277	118.19	88	EST115	115.00	6	1.0302	118.47
92	L.V115	115.00	6	1.0289	118.32	109	STA RITA115	115.00	6	1.0350	119.02
123	MIR115	115.00	7	1.0253	117.91	154	CEMPAN15	115.00	6	1.0282	118.24
191	CHANG115	115.00	6	1.0082	115.94	522	TCATIVÁ 115	115.00	6	1.0327	118.76
529	TCOLON 115	115.00	6	1.0437	120.02						

BUSES WITH VOLTAGE LESS THAN 1.0000:

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 13:25
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MAX INV CONT. MDN-VEL

AREA 6 [PANAMA] MACHINE SUMMARY:

BUS#	X-- NAME --X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
66	BLM13B	13.800	V2	38.0	9.0	25.0	0.0	1.0000	39.0	0.9732	47.0			1	6	
67	BLM13C	13.800	V3	38.0	9.0	25.0	0.0	1.0000	39.0	0.9732	47.0			1	6	
90	EST-13L	13.800	E1	20.0	3.4	12.0	-5.0	0.9900	20.5	0.9861	27.0			1	6	
91	EST-13T	13.800	E2	20.0	3.4	12.0	-5.0	0.9900	20.5	0.9861	27.0			1	6	
94	LV-13.8L	13.800	L1	22.3	5.4	12.0	-5.0	0.9950	23.1	0.9717	27.0			1	6	
95	LV-13.8T	13.800	L2	22.3	5.4	12.0	-5.0	0.9950	23.1	0.9717	27.0			1	6	
97	FOR13A	13.800	F1	88.6	-6.9	50.0	-50.0	1.0000	88.8	0.9970	111.0			1	6	
98	FOR13B	13.800	F2	87.9	-6.9	50.0	-50.0	1.0000	88.2	0.9969	111.0			1	6	
99	FOR13C	13.800	F3	88.6	-6.9	50.0	-50.0	1.0000	88.9	0.9970	111.0			1	6	
101	BAY13A	13.800	B1	61.6	20.2	50.0	-25.0	1.0000	64.8	0.9503	96.0			1	6	SYST
102	BAY13B	13.800	B2	75.6	21.4	50.0	-25.0	1.0000	78.6	0.9621	96.0			1	6	
108	BAY13C	13.800	B3	75.2	21.4	50.0	-25.0	1.0000	78.2	0.9619	100.0			1	6	
142	CANJ13A	13.800	C1	52.0	15.1	29.0	-29.0	1.0000	54.2	0.9602	69.0			1	6	
143	CANJ13B	13.800	C2	52.0	15.1	29.0	-29.0	1.0000	54.2	0.9602	69.0			1	6	
150	GUALACA 13-2	13.800	G2	9.6	-0.8	7.4	-7.4	1.0100	9.5	0.9961	14.8			1	6	
151	GUALACA13.8	13.800	G1	9.5	-0.9	7.4	-7.4	1.0100	9.4	0.9960	14.8			1	6	
152	BBLANCO_13.8	13.800	G1	6.6	0.0	6.1	0.0	1.0005	6.6	1.0000	11.6			1	6	
152	BBLANCO_13.8	13.800	G2	6.6	0.0	6.1	0.0	1.0005	6.6	1.0000	11.6			1	6	
193	GEBONYIC	13.800	G1	7.3	-1.2	4.0	-4.0	1.0000	7.4	0.9876	35.3			1	6	
193	GEBONYIC	13.800	G2	7.1	-1.1	4.0	-4.0	1.0000	7.2	0.9876	35.3			1	6	
204	BJOMIN13	13.800	G1	22.6	-11.9	13.0	-13.0	0.9950	25.7	0.8856	28.9			1	6	
204	BJOMIN13	13.800	G2	22.2	-11.6	13.0	-13.0	0.9950	25.2	0.8856	28.9			1	6	
205	BAITUN13.8	13.800	G1	35.4	13.1	26.6	-26.6	1.0100	37.4	0.9375	50.6			1	6	
205	BAITUN13.8	13.800	G2	35.4	13.1	26.6	-26.6	1.0100	37.4	0.9375	50.6			1	6	
301	CONC13.8	13.800	G1	9.0	5.0	5.0	-5.0	0.9404	10.9	0.8742	13.5			1	6	
302	PASOANCH13.8	13.800	P1	3.7	2.0	2.0	-2.0	0.9385	4.5	0.8823	6.2			1	6	
304	ALGA13.8	13.800	A1	7.2	0.0	2.0	0.0	1.1069	6.5	1.0000	13.5			1	6	
305	ELALTO	13.800	G1	14.0	-5.0	12.0	-5.0	1.0106	14.7	0.9417	20.6			1	6	
305	ELALTO	13.800	G2	14.0	-5.0	12.0	-5.0	1.0106	14.7	0.9414	20.6			1	6	
307	CHAN1 A	13.800	G1	90.6	-10.8	50.0	-50.0	1.0000	91.2	0.9930	118.6			1	6	
308	CHAN1 B	13.800	G2	90.2	-10.8	50.0	-50.0	1.0000	90.9	0.9929	118.6			1	6	
312	PANDO13.8	13.800	G1	12.4	-1.1	10.0	-5.0	1.0000	12.5	0.9958	19.9			1	6	
312	PANDO13.8	13.800	G2	12.4	-1.1	10.0	-5.0	1.0000	12.5	0.9958	19.9			1	6	
317	MENDRE13.8	13.800	M1	7.6	0.0	0.0	0.0	1.1065	6.9	1.0000	35.3			1	6	
317	MENDRE13.8	13.800	M2	7.6	0.0	0.0	0.0	1.1065	6.9	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C1	4.4	0.0	0.0	0.0	1.1068	4.0	1.0000	35.3			1	6	
323	COCHEA 13.8	13.800	C2	4.4	0.0	0.0	0.0	1.1068	4.0	1.0000	35.3			1	6	
324	POTRER 13.8	13.800	P1	3.6	2.0	2.0	-2.0	1.0052	4.1	0.8759	6.2			1	6	
340	PEDGALITO138	13.800	P1	19.8	10.7	12.0	-5.0	1.0100	22.3	0.8807	27.0			1	6	
342	LORENA13.8	13.800	L1	13.2	0.6	10.5	-5.0	1.0200	13.0	0.9988	19.9			1	6	
343	PRUDENCIA_1	13.800	G1	20.6	-0.4	9.8	-9.8	1.0200	20.2	0.9998	33.0			1	6	
344	PRUDENCIA_2	13.800	G2	20.6	-0.4	9.8	-9.8	1.0200	20.2	0.9998	33.0			1	6	
346	LORENA 13-2	13.800	L2	14.0	0.7	10.5	-5.0	1.0200	13.7	0.9989	19.9			1	6	

350	MACANO	13.8	13.800	G1	3.2	-2.0	2.0	-2.0	1.0754	3.5	0.8509	6.2		1	6
351	PERLAS N	13	13.800	G1	9.2	5.0	5.0	-5.0	0.9795	10.7	0.8791	13.5		1	6
352	PERLAS S	13	13.800	G1	9.2	5.0	5.0	-5.0	0.9795	10.7	0.8791	13.5		1	6
353	PORVEN N	13	13.800	G1	2.7	0.0	2.0	0.0	1.0766	2.5	1.0000	6.2		1	6
525	TCOLON 13A		13.800	G1	38.3	19.3	19.3	19.3	1.0306	41.6	0.8932	44.4		1	6
526	TCOLON 13B		13.800	G2	38.3	19.3	19.3	19.3	1.0306	41.6	0.8932	44.4		1	6
541	TOABRE		0.6000	1	30.0	0.0	0.0	0.0	1.0033	29.9	1.0000	166.7		1	6
SUBSYSTEM TOTALS					1404.8	139.8	830.5	-542.1				2174.3			

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 13:25
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MAX INV CONT. MDN-VEL

AREA 7 [ACANAL] MACHINE SUMMARY:

BUS#	X-- NAME	--X	BASKV	ID	MW	MVAR	QMAX	QMIN	ETERM	CURRENT	PF	MVABASE	X T R A N	GENTAP	ZONE	AREA	SWING
129	MIR13D		13.800	G4	35.0	0.0	15.0	0.0	1.0184	34.4	1.0000	44.1			2	7	
130	MIR13F		13.800	G5	17.0	0.0	8.0	0.0	1.0317	16.5	1.0000	27.7			2	7	
140	GAT6A		6.9000	G1	1.9	-0.7	2.0	-2.0	1.0100	2.1	0.9333	4.1			2	7	
140	GAT6A		6.9000	G2	1.9	-0.7	2.0	-2.0	1.0100	2.1	0.9333	4.1			2	7	
140	GAT6A		6.9000	G3	1.9	-0.7	2.0	-2.0	1.0100	2.1	0.9333	4.1			2	7	
141	GAT6B		6.9000	G4	3.9	-1.5	3.0	-3.0	1.0100	4.1	0.9314	5.6			2	7	
141	GAT6B		6.9000	G5	3.9	-1.5	3.0	-3.0	1.0100	4.1	0.9314	6.2			2	7	
141	GAT6B		6.9000	G6	3.9	-1.5	3.0	-3.0	1.0100	4.1	0.9314	6.2			2	7	
170	MIR13G		13.800	M1	17.0	6.8	11.2	6.8	1.0458	17.5	0.9281	23.0			2	7	
171	MIR13H		13.800	M1	17.0	6.8	11.2	6.8	1.0548	17.4	0.9281	23.0			2	7	
171	MIR13H		13.800	M2	17.0	6.8	11.2	6.8	1.0548	17.4	0.9281	23.0			2	7	
SUBSYSTEM TOTALS					120.4	13.7	71.5	5.5				171.3					

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 13:25
PLAN. EXP-SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MAX INV CONT. MDN-VEL

AREA TOTALS
IN MW/MVAR

X-- AREA	--X	FROM GENERATION	TO LOAD	TO BUS SHUNT	TO LINE SHUNT	FROM CHARGING	TO NET INT	LOSSES	DESIRED NET INT
1		1199.9	1312.2	0.0	0.0	0.0	-145.0	32.8	-145.0
GUATEMAL		59.0	349.5	-265.8	0.0	412.0	39.7	347.6	
2		913.4	902.0	0.0	0.0	0.0	0.0	11.4	0.0
SALVADOR		109.1	182.3	-58.0	0.0	219.4	38.1	166.1	
3		1009.2	985.5	0.0	0.0	0.0	0.1	23.6	0.0
HONDURAS		68.3	290.6	-187.8	0.0	301.9	-9.8	277.3	
4		536.7	527.1	0.0	0.0	0.0	0.0	9.6	0.0
NICA		42.1	224.5	-98.5	0.0	142.6	-82.7	141.4	
5		1345.1	1324.8	0.0	0.0	0.0	-0.5	20.7	0.0
C.RICA		253.9	569.4	-235.9	0.0	476.4	33.3	363.5	
6		1404.8	1249.6	0.0	0.0	0.0	71.5	70.1	170.0

PANAMA	139.8	218.9	-261.6	0.0	451.9	-10.1	642.1	
7	120.4	45.2	0.0	0.0	0.0	73.9	1.2	50.0
ACANAL	13.7	7.9	0.0	0.0	0.0	-8.5	14.3	
9	0.0	13.7	0.0	0.0	0.0	0.0	0.0	-75.0
COLON	0.0	2.4	0.0	0.0	0.0	0.0	0.0	
TOTALS	6529.6	6360.1	0.0	0.0	0.0	0.0	169.5	0.0
	686.0	1845.5	-1107.7	0.0	2004.2	0.0	1952.3	

Resultados de Estabilidad Transitoria

RESUMEN GENERAL

Año 2010

Falla y apertura de un circuito de Llano Sánchez – Panamá II
Falla y apertura de un circuito de Veladero – Llano Sánchez

Año 2011

Falla y apertura de un circuito de Llano Sánchez – Panamá II
Falla y apertura de un circuito de Veladero – Llano Sánchez

Año 2012

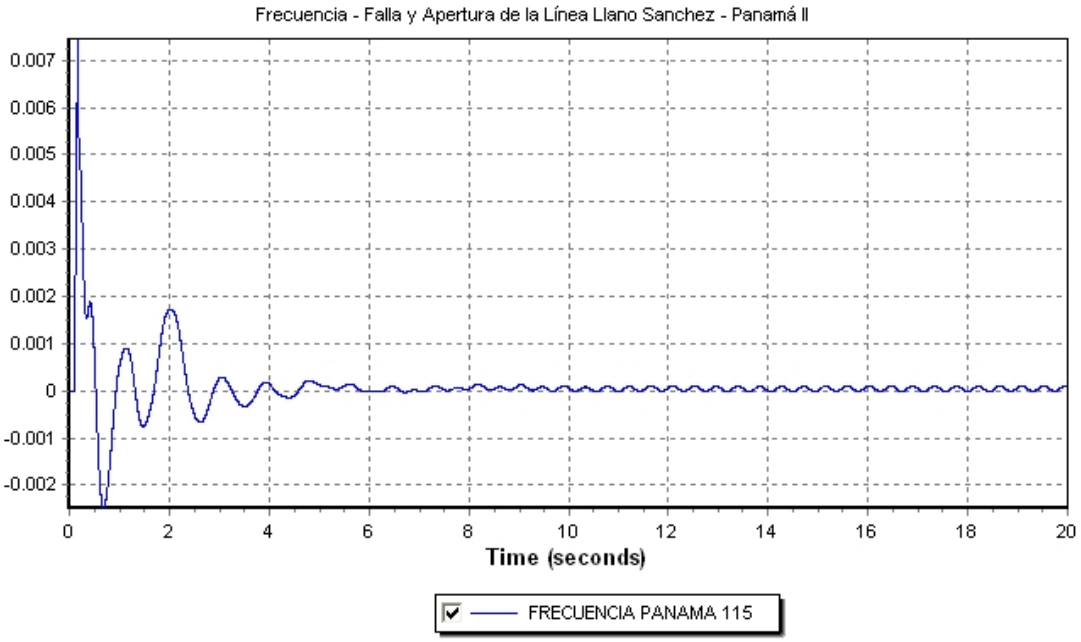
Falla y apertura de un circuito de Llano Sánchez – Panamá II
Falla y apertura de un circuito de Veladero – Llano Sánchez

Año 2013

Falla y apertura de un circuito de Llano Sánchez – Panamá II
Falla y apertura de un circuito de Mata de Nance - Veladero

AÑO 2010
Falla y Apertura de la línea Llano Sánchez – Panamá II

PLAN DE EXPANSION DEL SIN CON C.A. JUNIO 2009
AÑO 2010 ESC MOD DEM MAX INV



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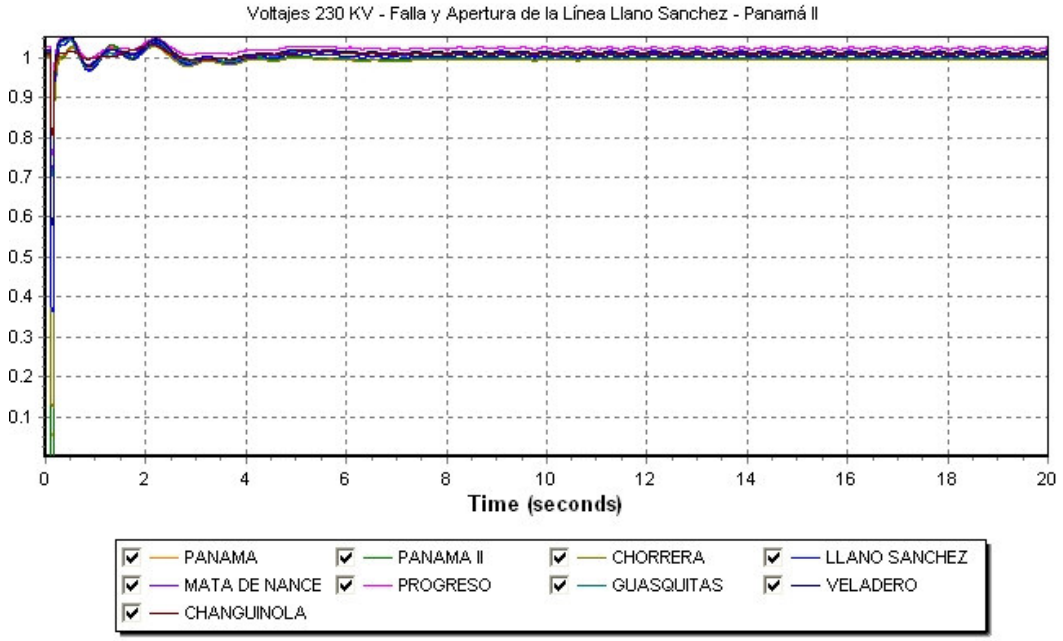
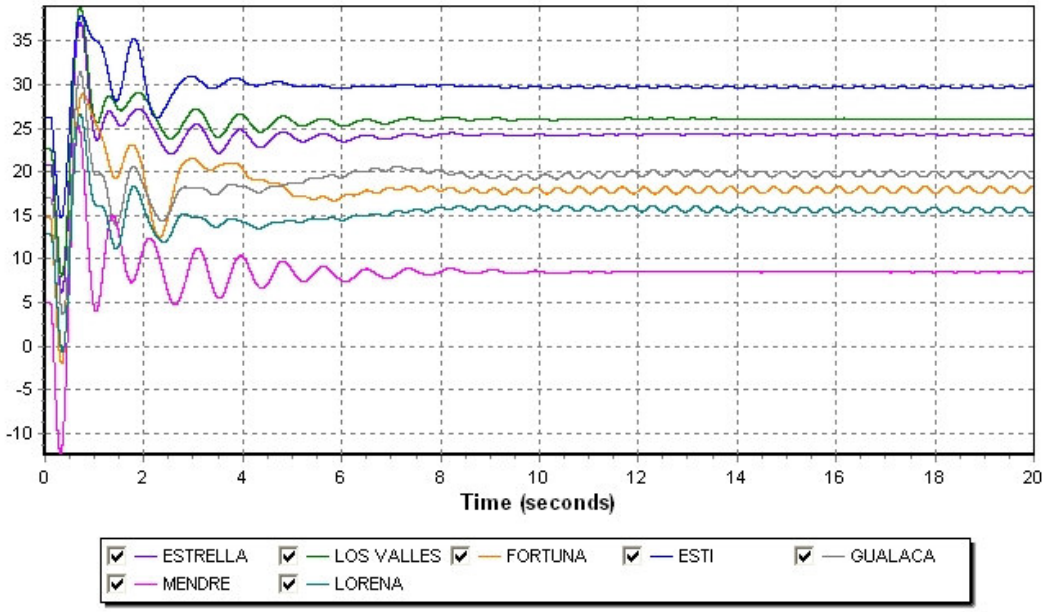
AÑO 2010 ESC MOD DEM MAX INV



PLAN DE EXPANSION DEL SIN CON C.A. JUNIO 2009
Año 2010 ESC MOD DEM MAX INV

Angulos de las Unidades - Falla y Apertura de la Línea Llano Sanchez - Panamá II



PLAN DE EXPANSION DEL SIN CON C.A. JUNIO 2009
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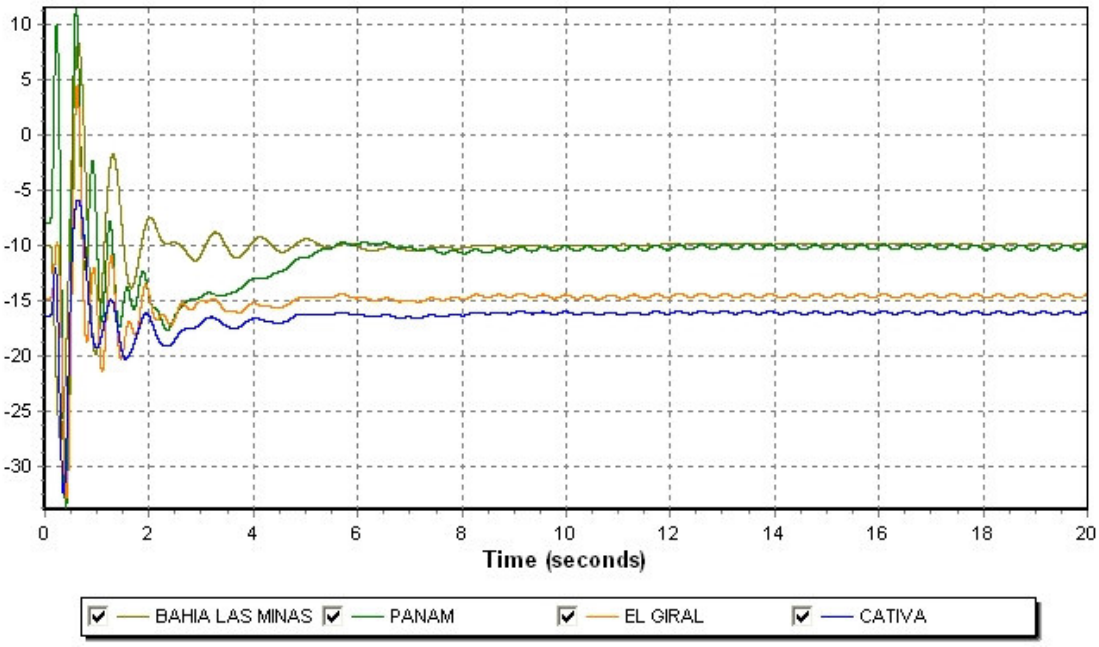
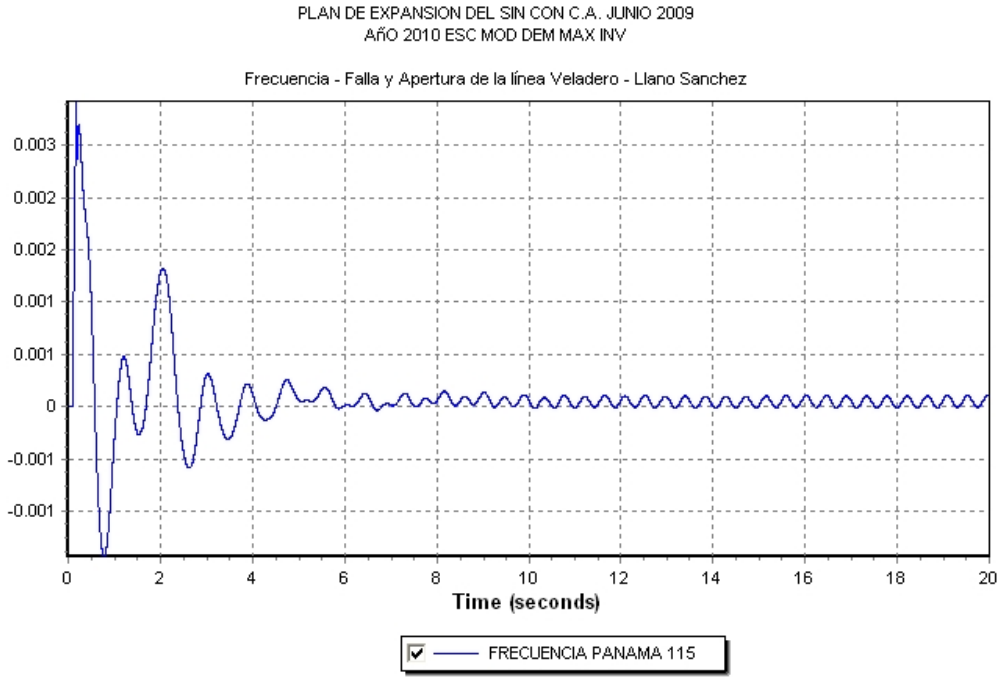
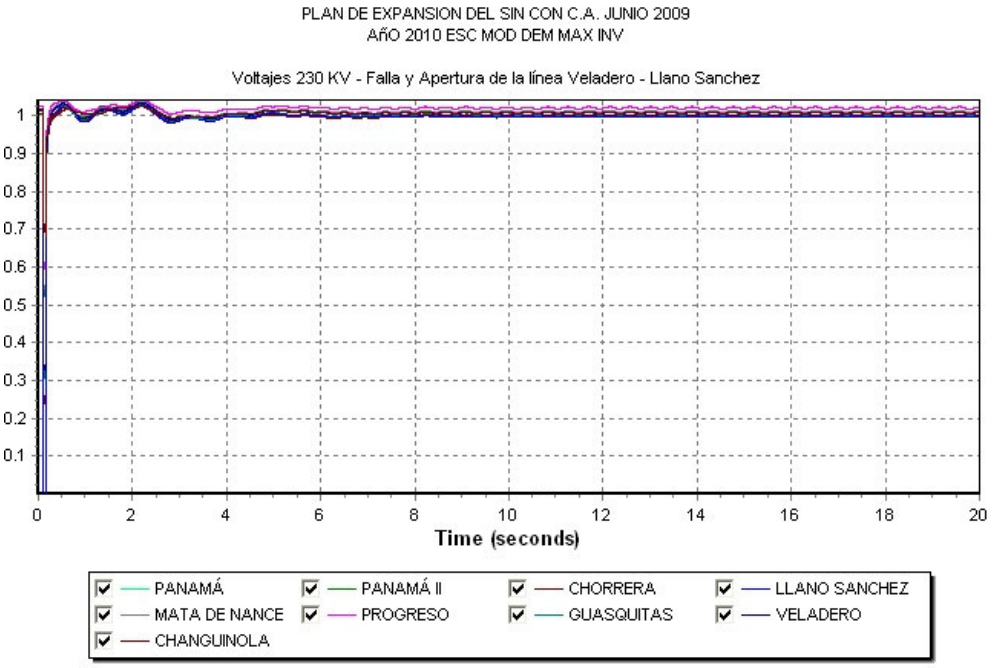
Angulos de las Unidades - Falla y Apertura de la Línea Llano Sanchez - Panamá II



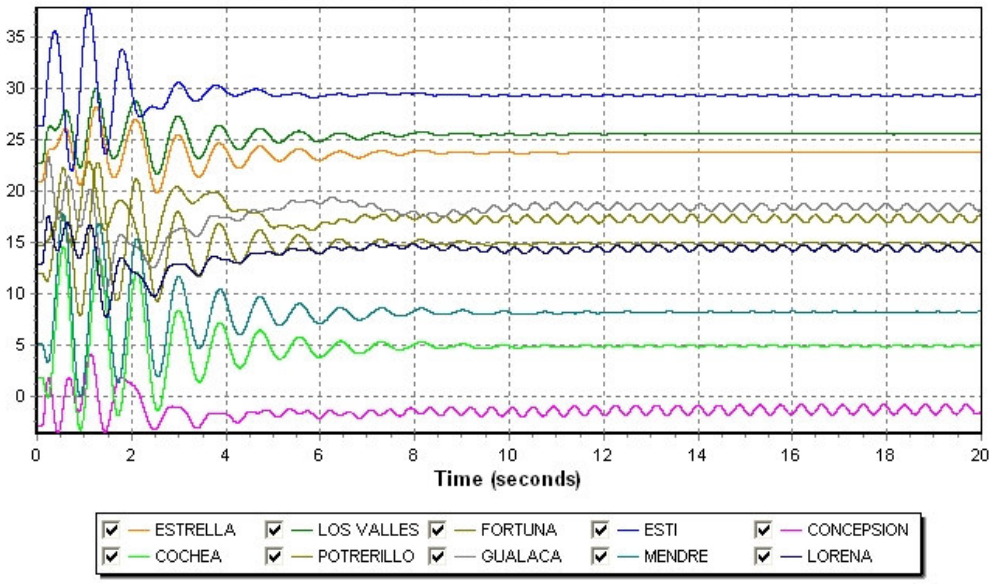
Falla y Apertura de línea Veladero – Llano Sánchez





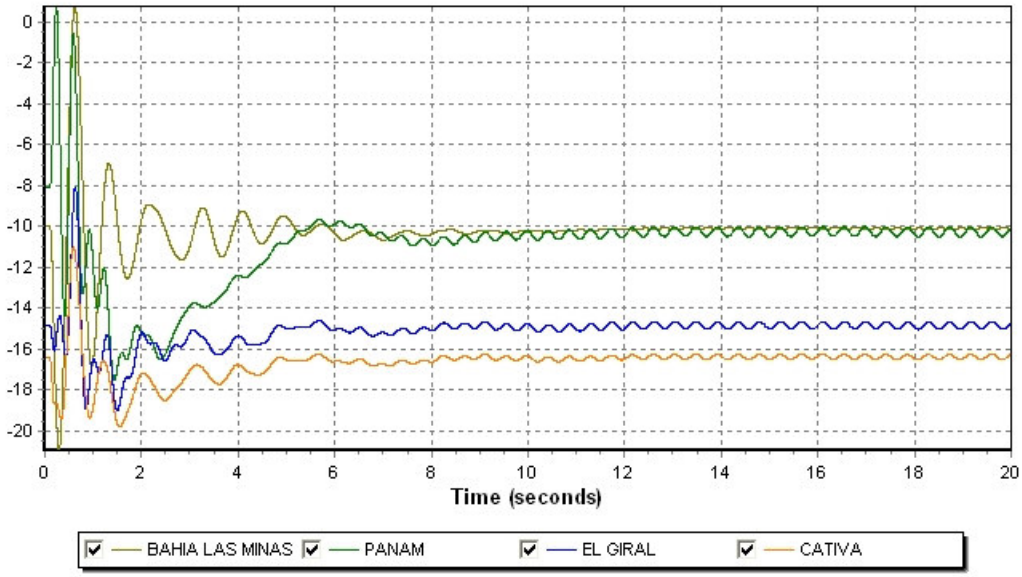
PLAN DE EXPANSION DEL SIN CON C.A. JUNIO 2009
Año 2010 ESC MOD DEM MAX INV

Angulo de las Unidades - Falla y Apertura de la línea Veladero - Llano Sanchez

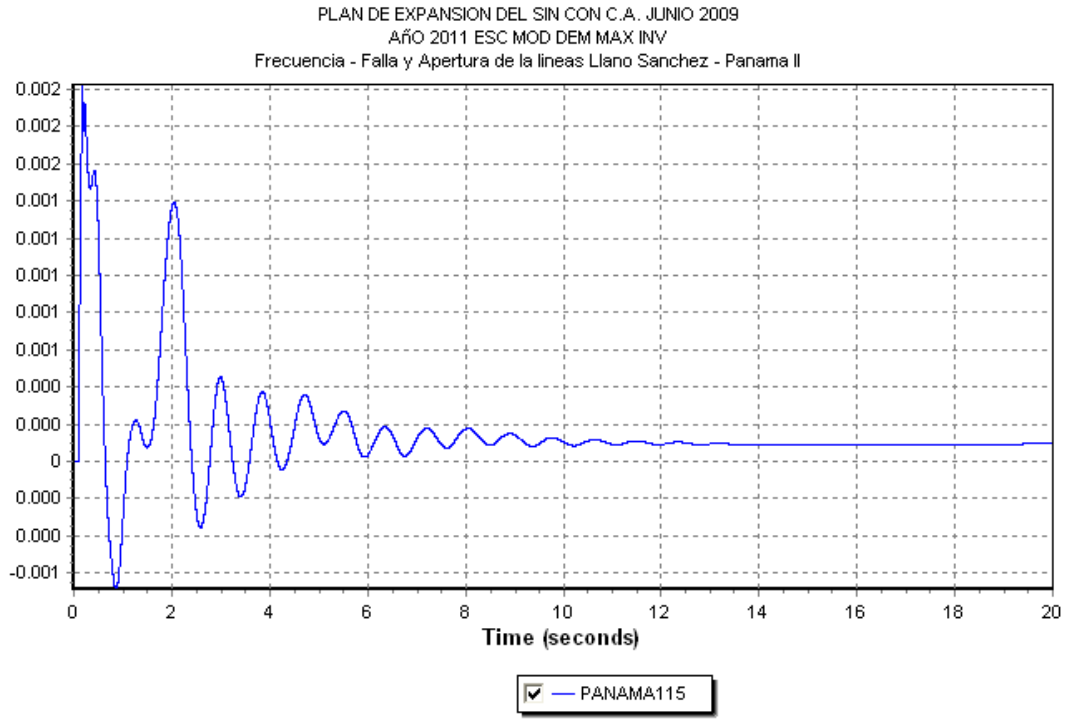


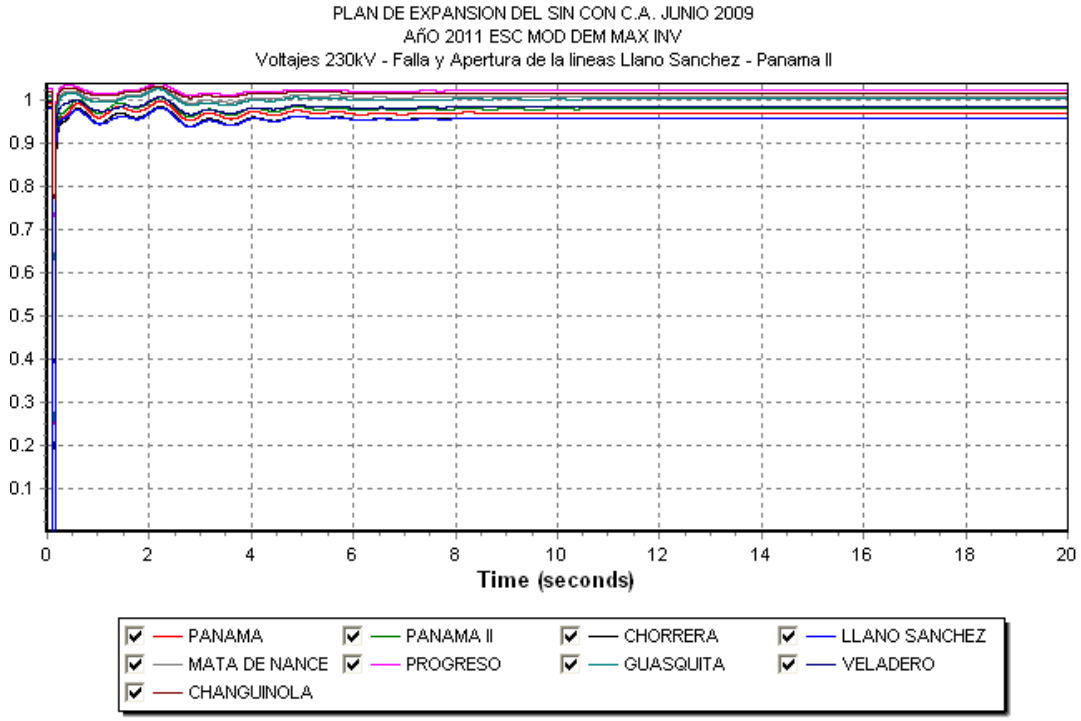
PLAN DE EXPANSION DEL SIN CON C.A. JUNIO 2009
Año 2010 ESC MOD DEM MAX INV

Angulo de las Unidades - Falla y Apertura de la línea Veladero - Llano Sanchez

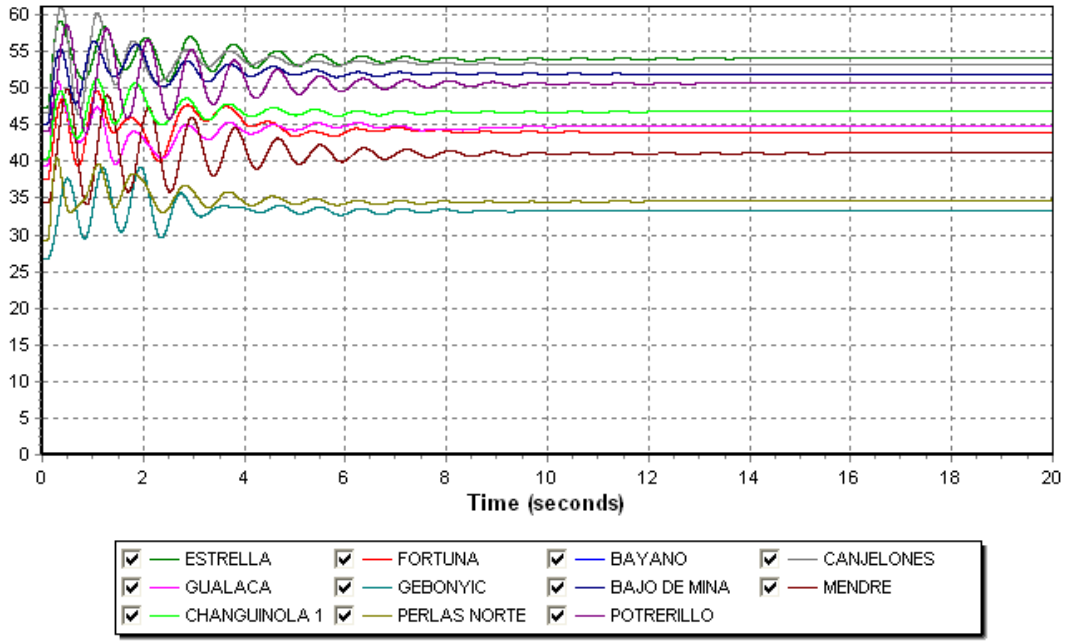


Año 2011
Falla y Apertura de la líneas Llano Sánchez – Panamá II

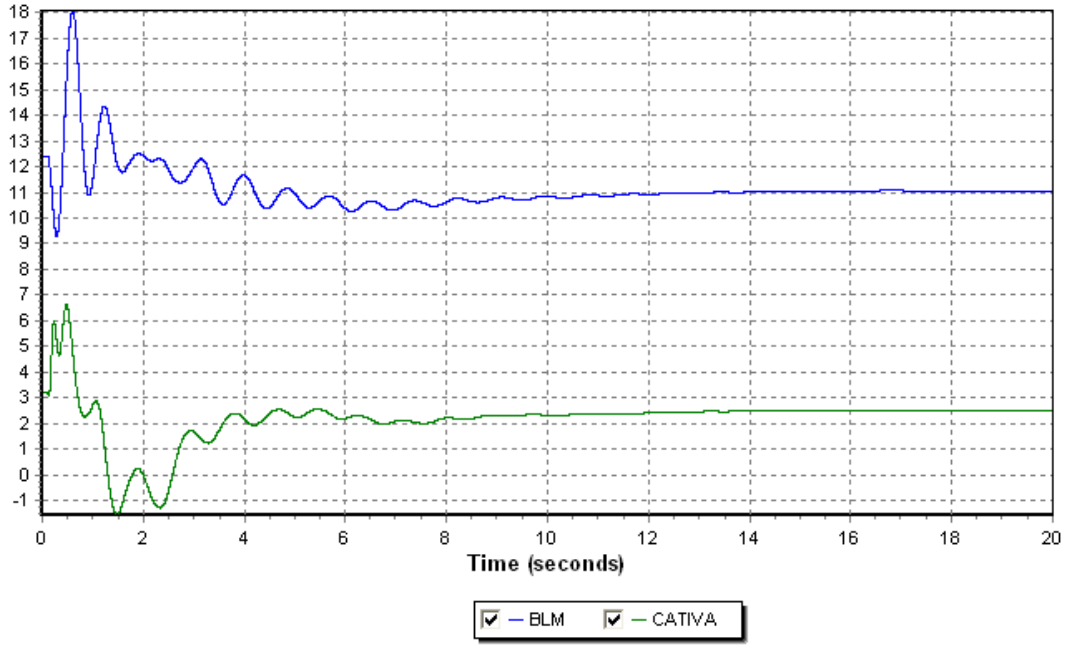




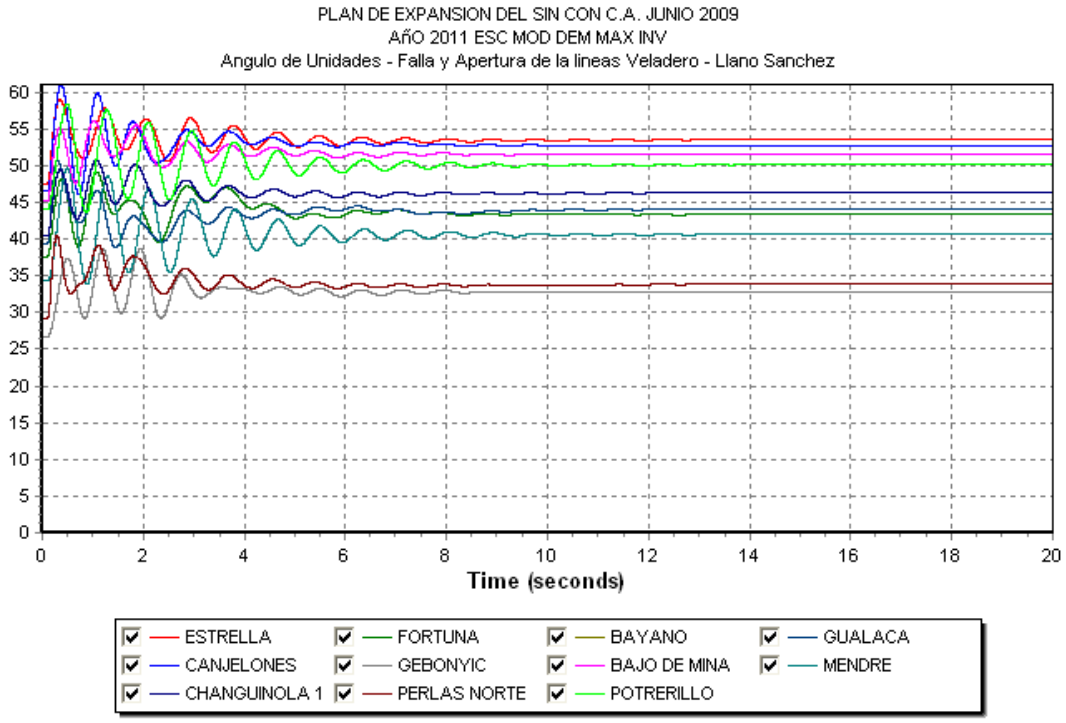
PLAN DE EXPANSION DEL SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MAX INV
Angulo de Unidades - Falla y Apertura de la lineas Llano Sanchez - Panama II

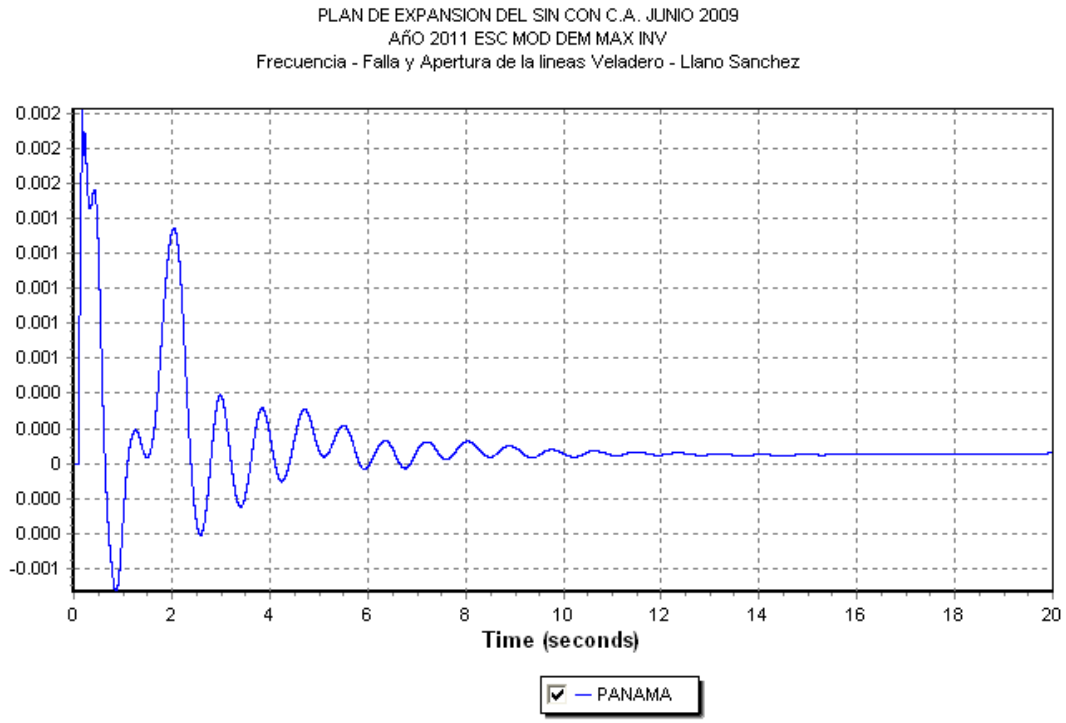


PLAN DE EXPANSION DEL SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MAX INV
Angulo de Unidades - Falla y Apertura de la lineas Llano Sanchez - Panama



Falla y Apertura de las líneas Veladero – Llano Sánchez





PLAN DE EXPANSION DEL SIN CON C.A. JUNIO 2009
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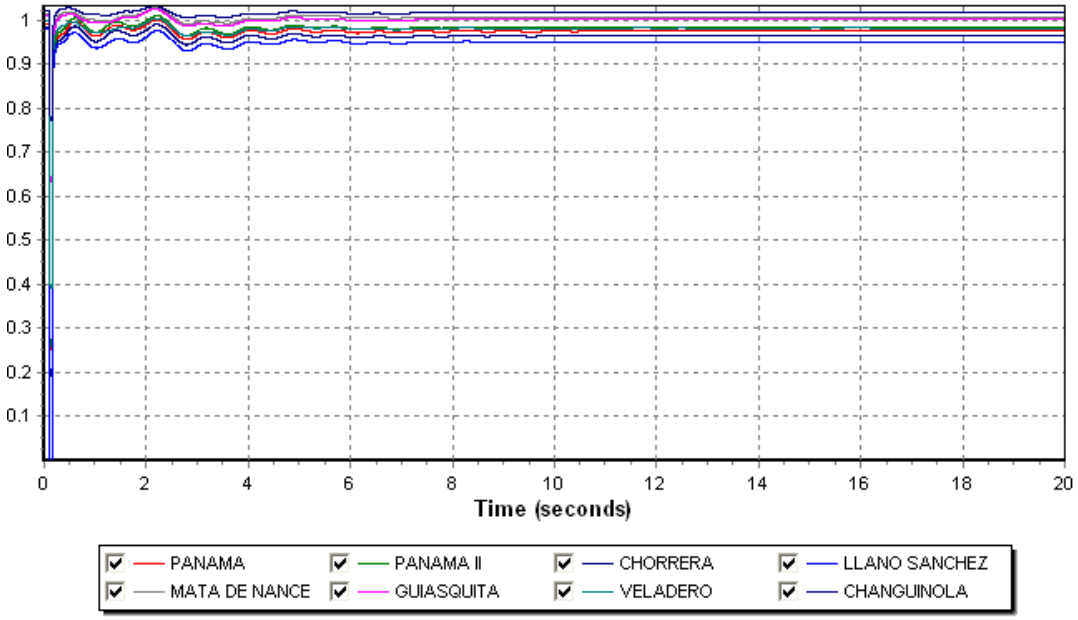
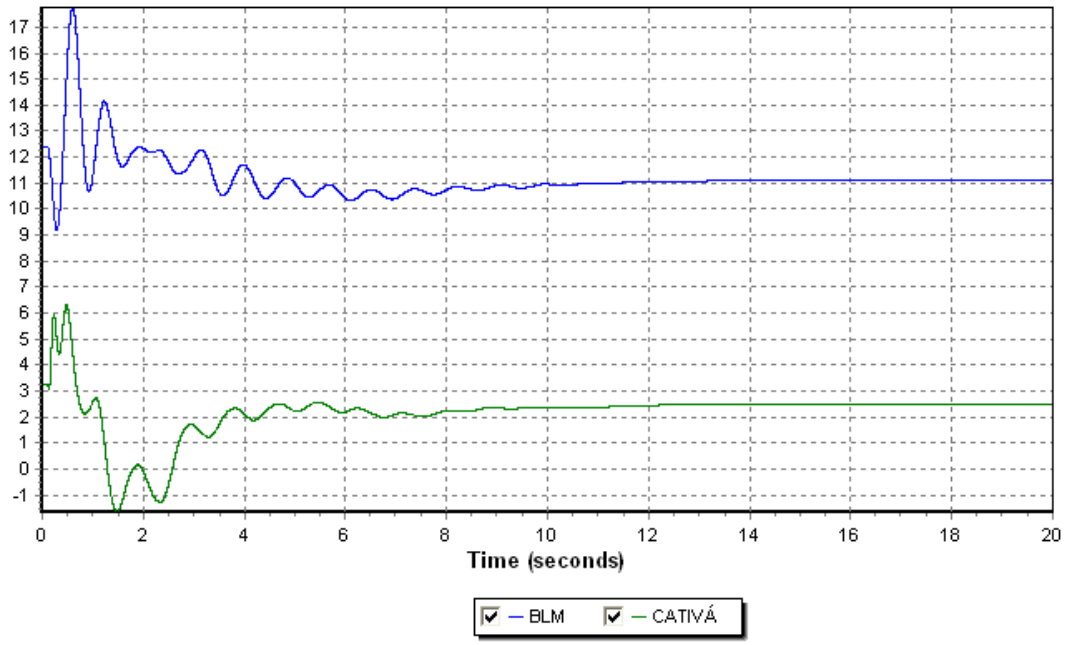
Voltajes 230kV - Falla y Apertura de la lineas Veladero - Llano Sanchez

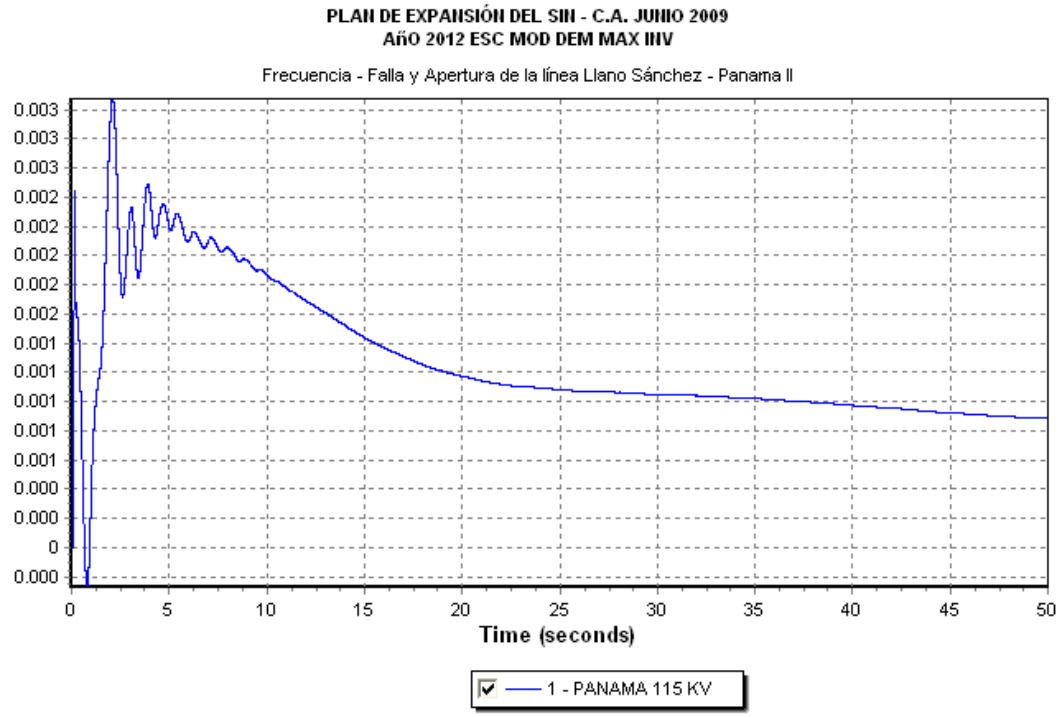


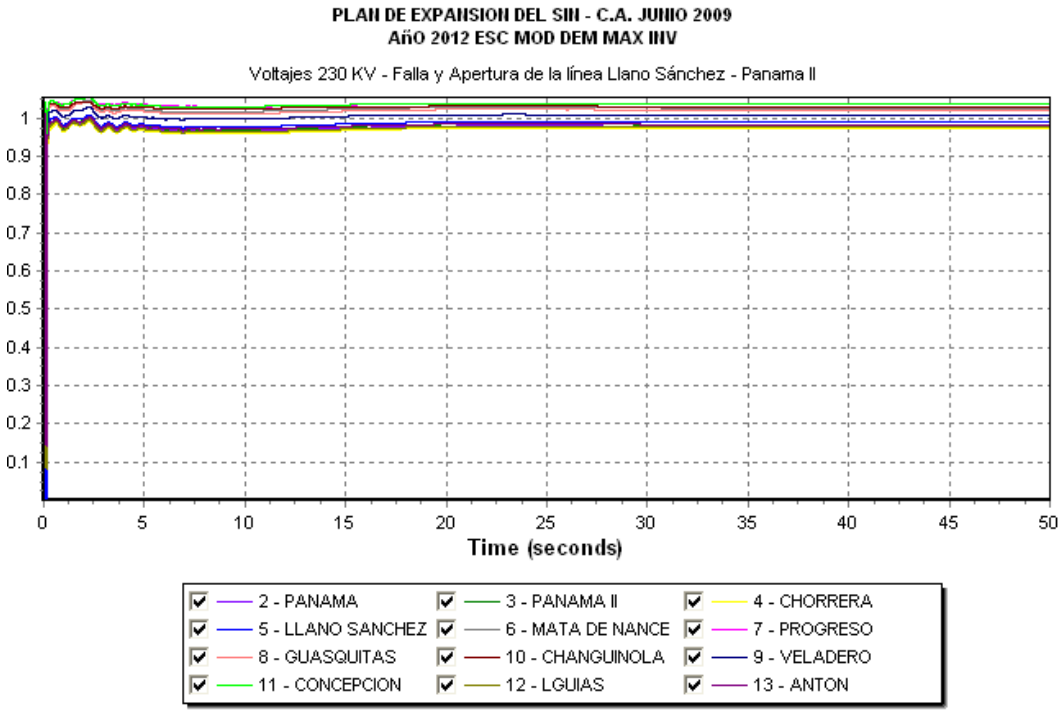
PLAN DE EXPANSION DEL SIN CON C.A. JUNIO 2009
AñO 2011 ESC MOD DEM MAX INV
Voltajes 230kV - Falla y Apertura de la lineas Veladero - Llano Sanchez



AÑO 2012

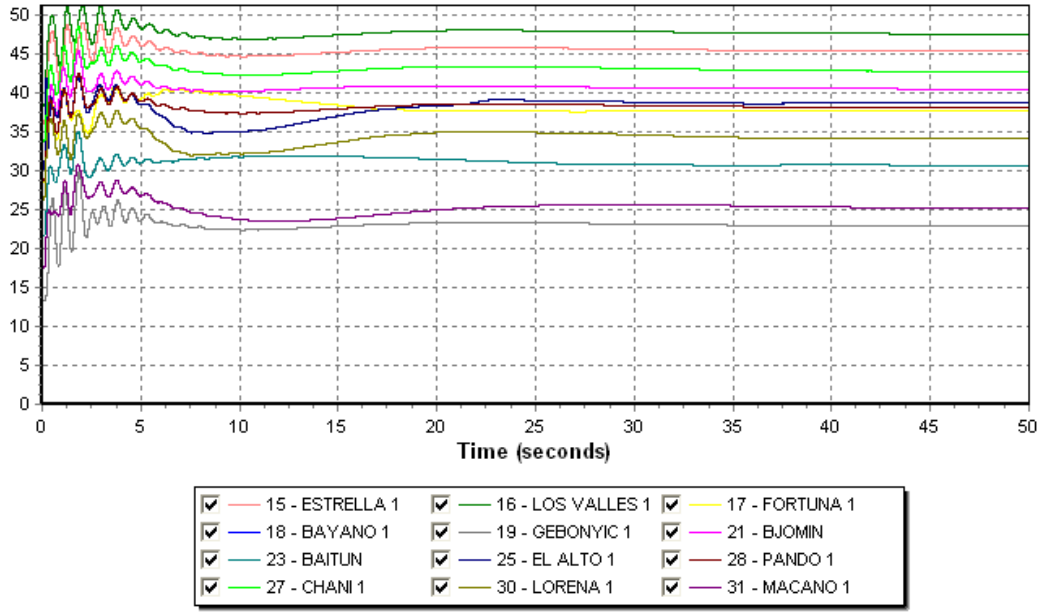
Falla y Apertura de la línea Llano Sánchez – Panamá





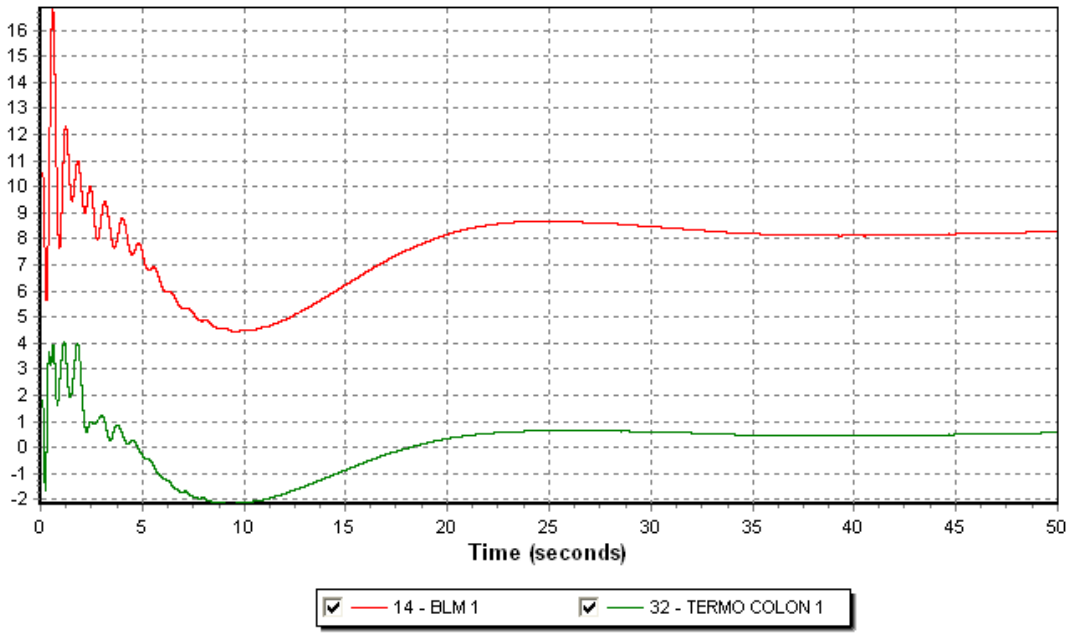
PLAN DE EXPANSION DEL SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MAX IIIV

Angulo de Unidades - Falla y Apertura de la línea Llano Sánchez - Panama II

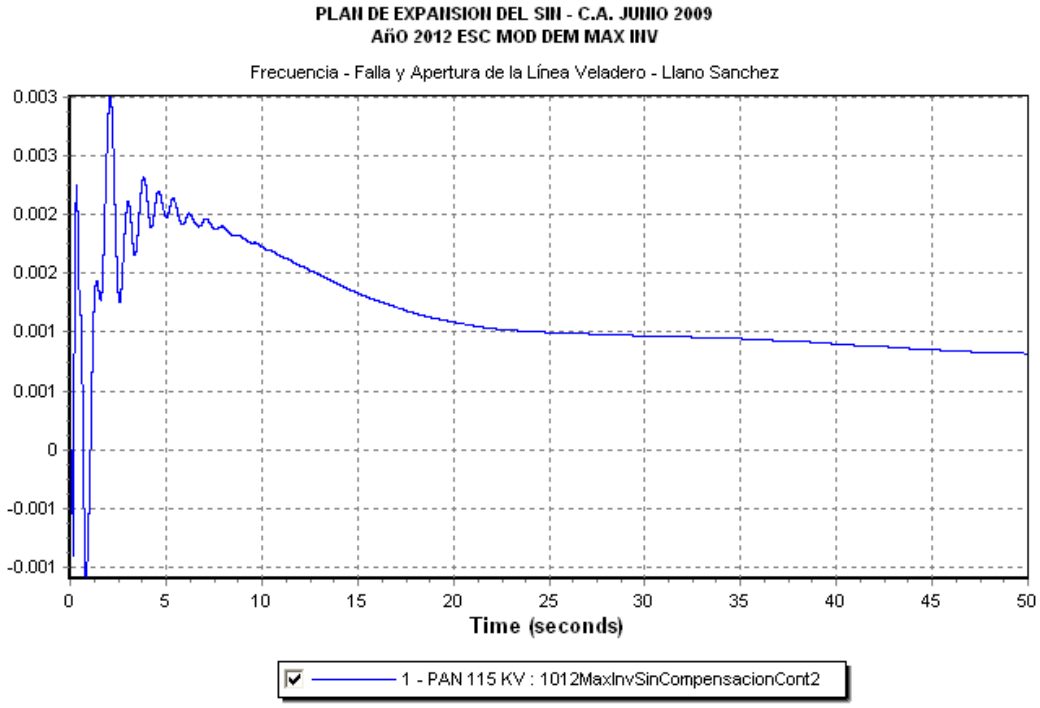


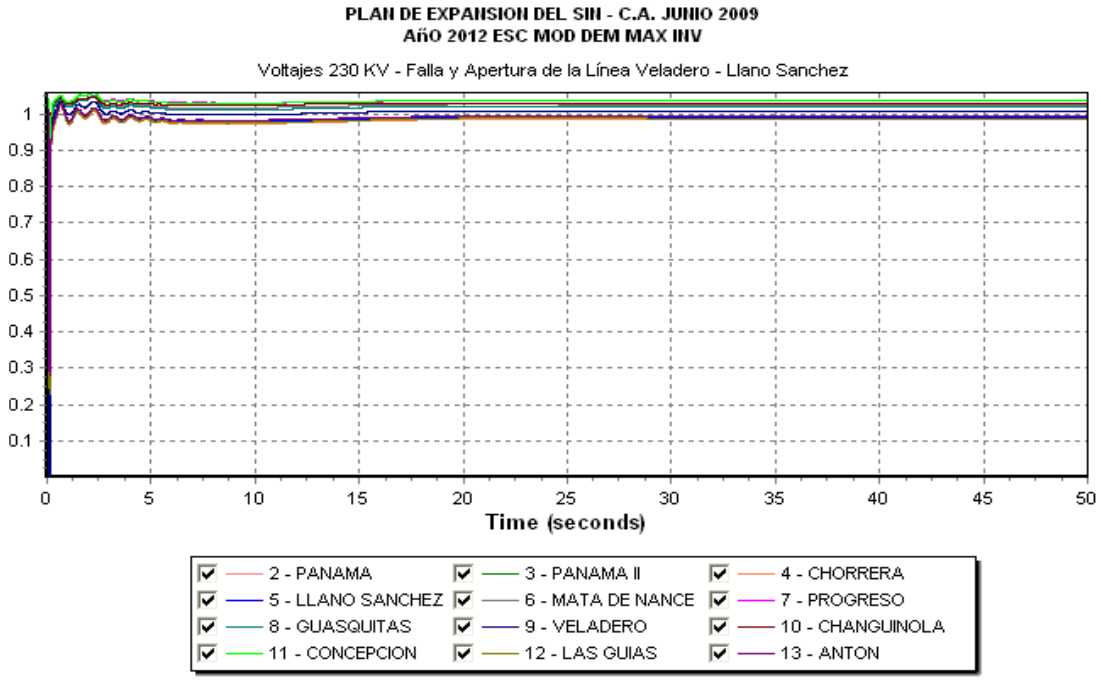
PLAN DE EXPANSION DEL SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MAX IIIV

Angulo de Unidades - Falla y Apertura de la línea Llano Sánchez - Panama II



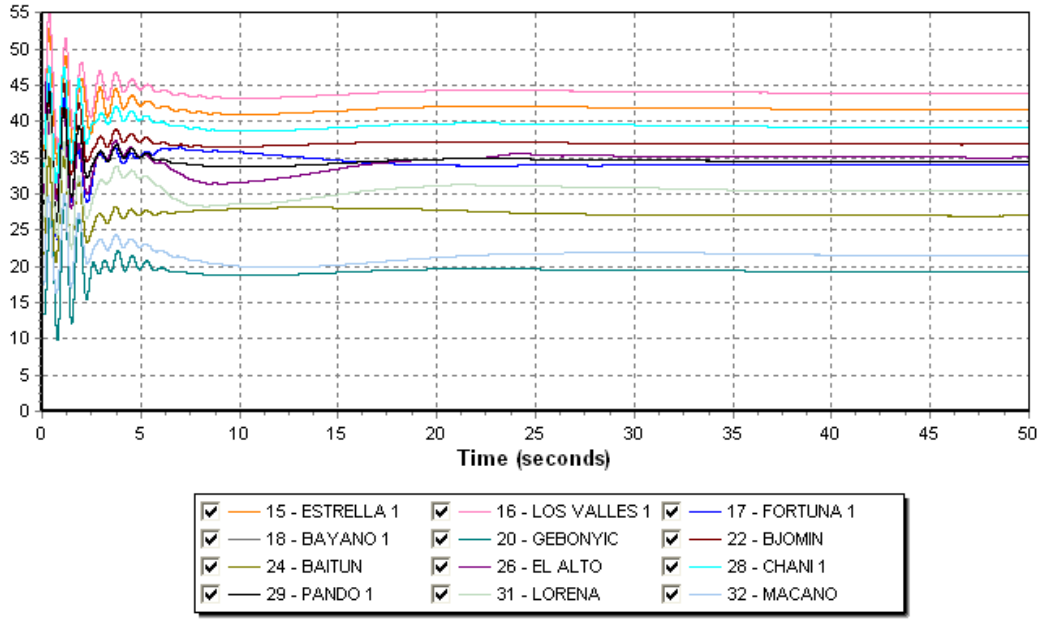
Falla y Apertura de línea Veladero – Llano Sánchez





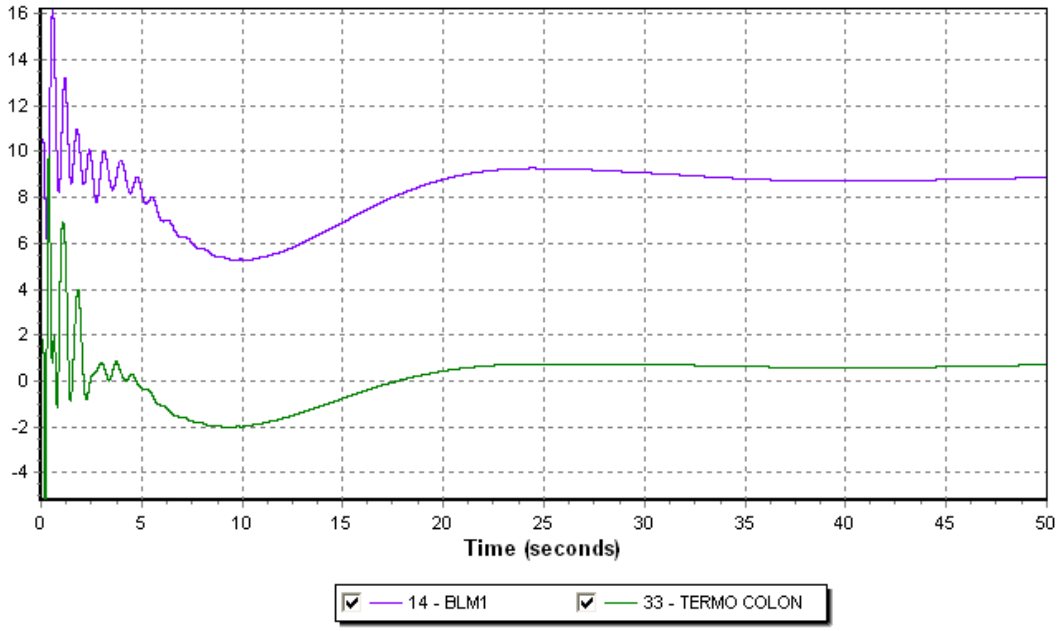
PLAN DE EXPANSION DEL SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MAX IHV

Angulos de las Unidades - Falla y Apertura de la Línea Veladero - Llano Sanchez

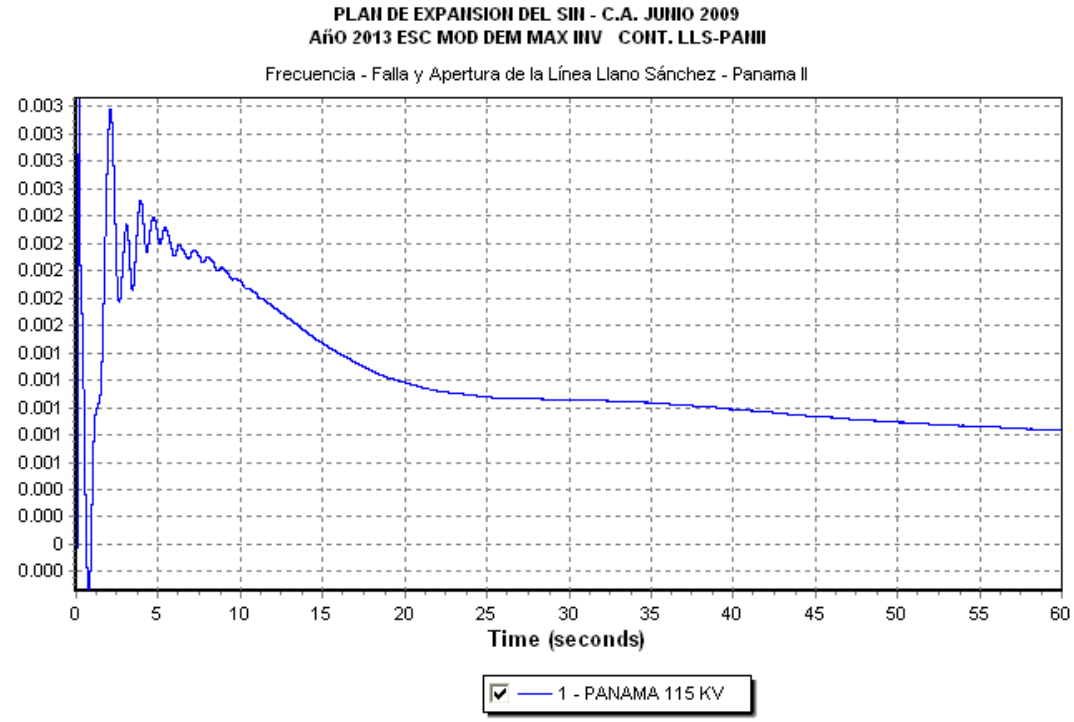


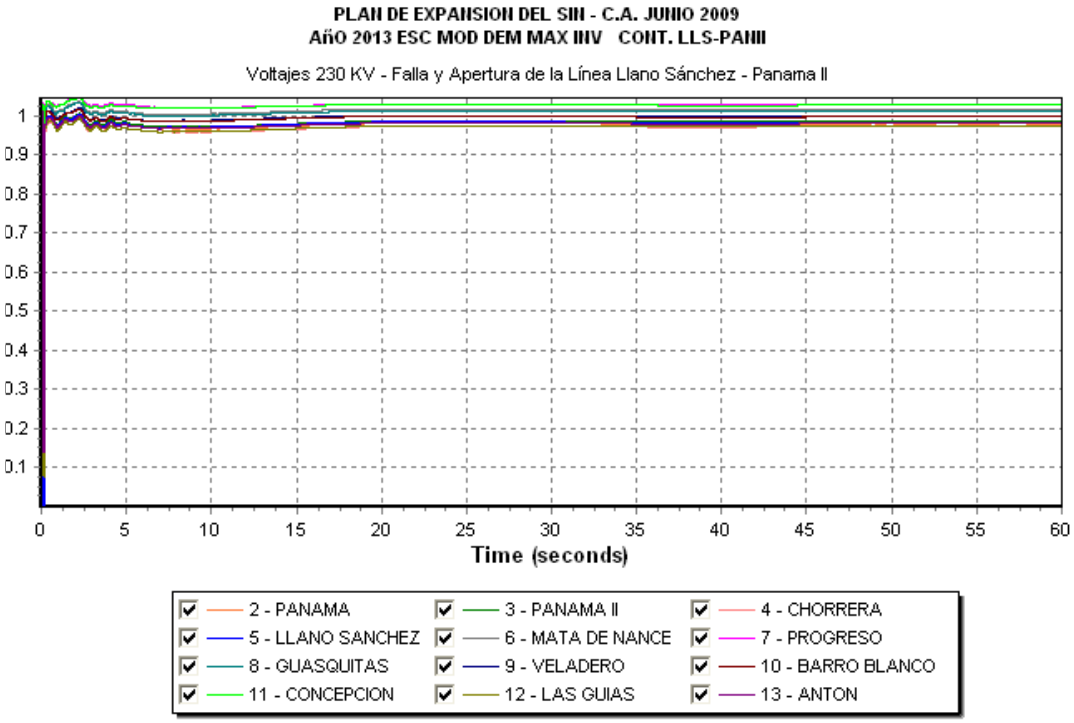
PLAN DE EXPANSION DEL SIN - C.A. JUNIO 2009
AñO 2012 ESC MOD DEM MAX IHV

Angulos de las Unidades - Falla y Apertura de la Línea Veladero - Llano Sanchez



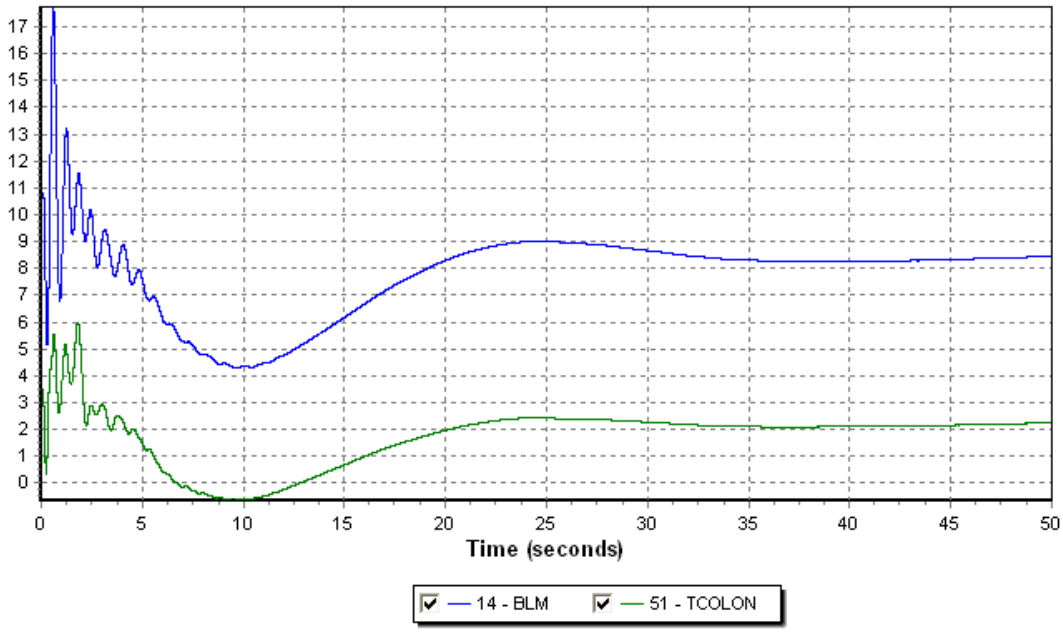
Año 2013
Contingencia Llano Sánchez – Panamá II





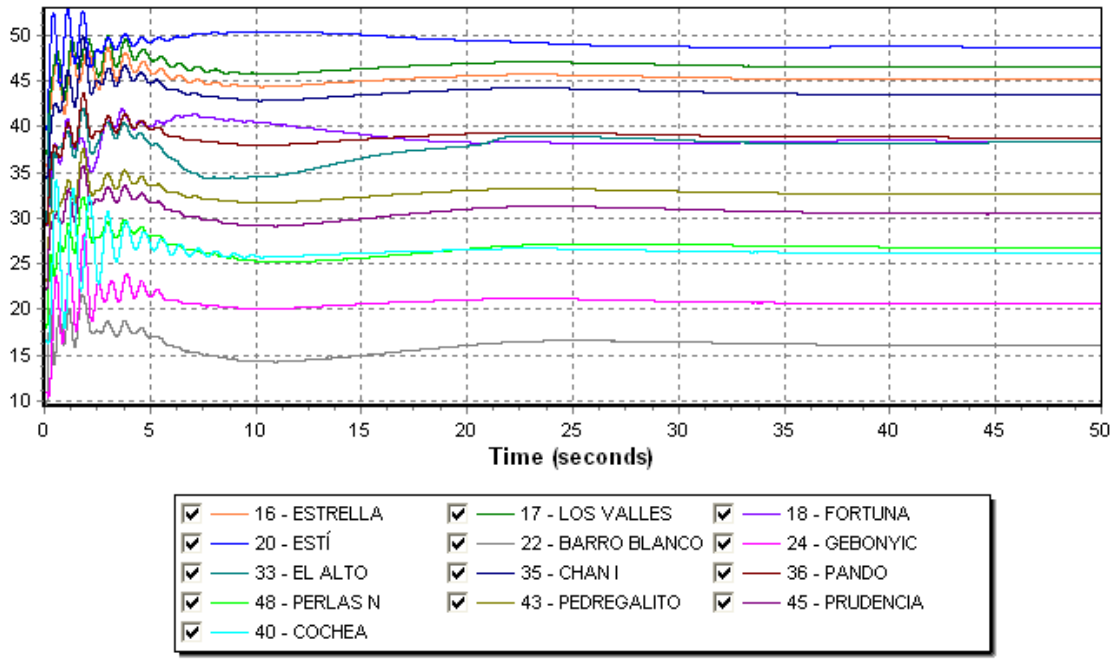
PLAN DE EXPANSION DEL SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MAX INV CONT. LLS-PANII

Angulo de Unidades - Falla y Apertura de la Línea Llano Sánchez - Panamá II

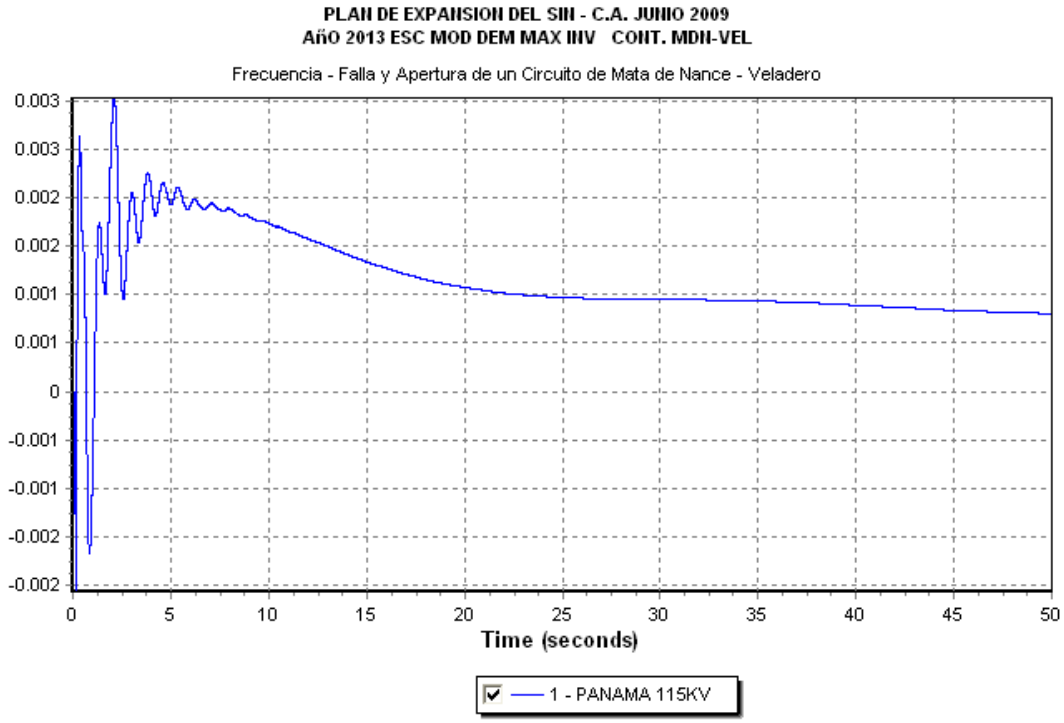


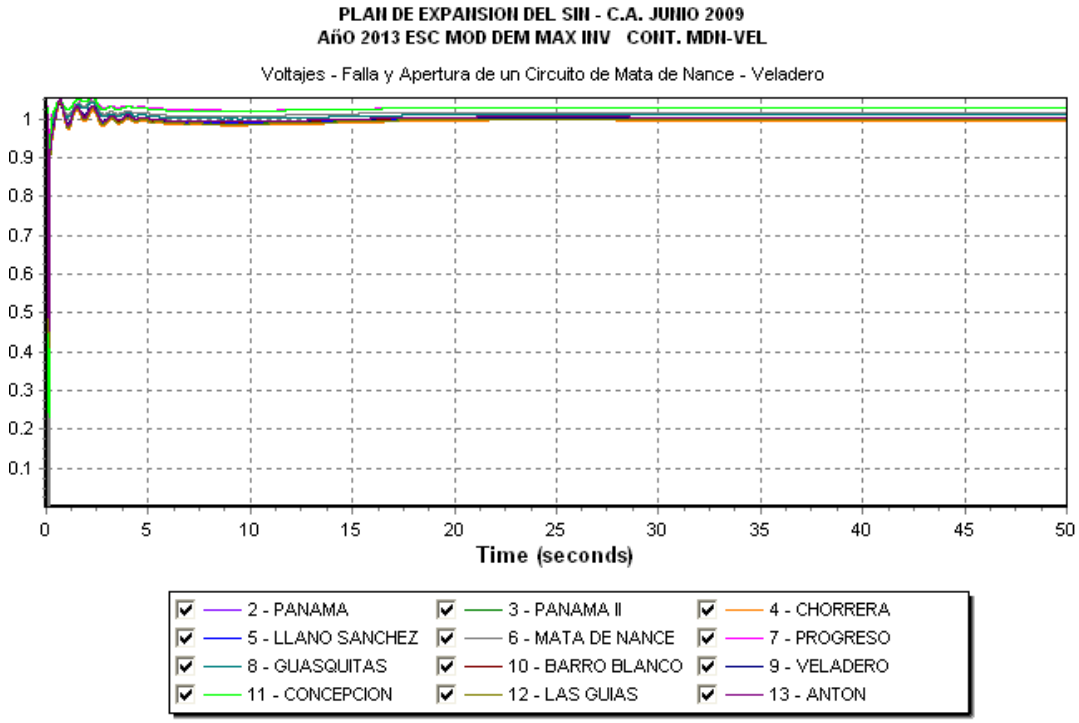
PLAN EXP DE EXPANSION DEL SIN - C.A. JUNIO 2009
AñO 2013 ESC MOD DEM MAX INV CONT. LLS-PANII

Angulo de Unidades - Falla y Apertura de la Línea Llano Sánchez - Panamá II



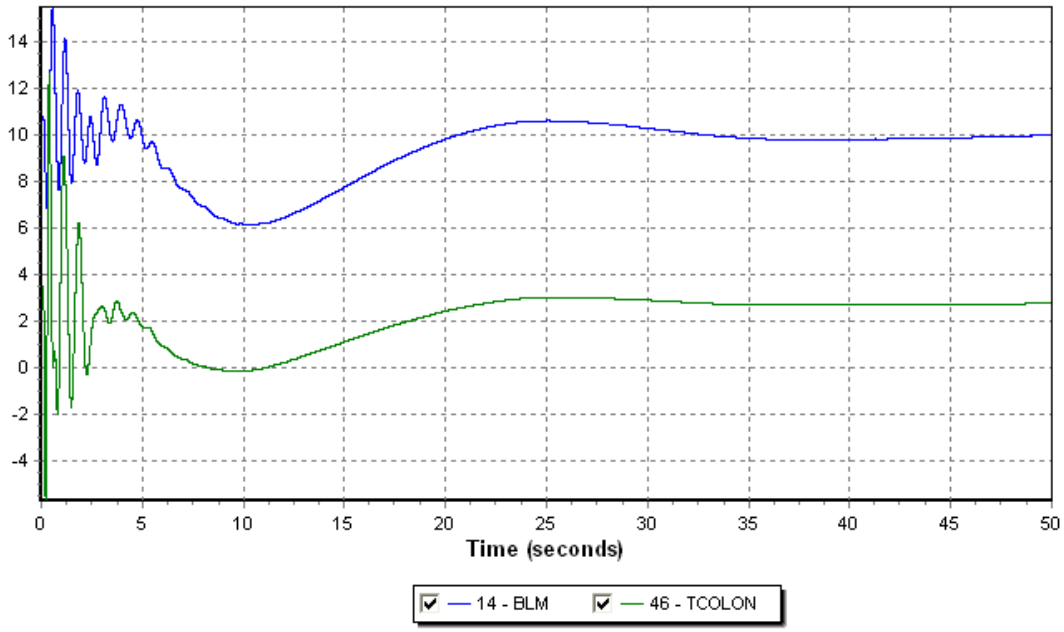
Contingencia Mata de Nance – Veladero





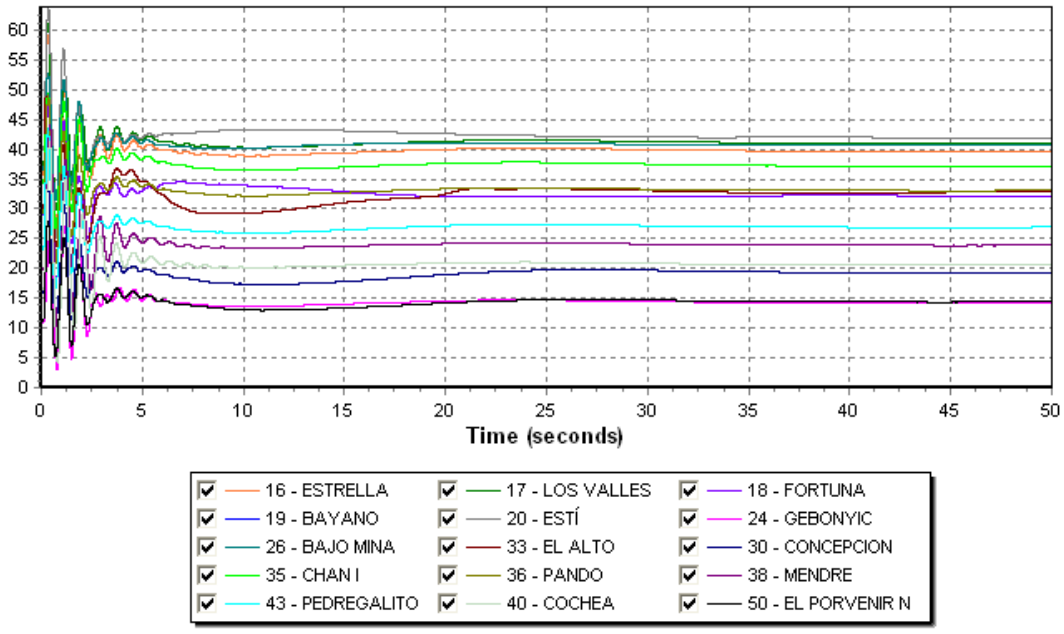
PLAN DE EXPANSION DEL SIN - C.A. JUNIO 2009
AÑO 2013 ESC MOD DEM MAX INV CONT. MDN-VEL

Angulos de Unidades - Falla y Apertura de un Circuito de Mata de Nance - Veladero



PLAN DE EXPANSION DEL SIN - C.A. JUNIO 2009
AÑO 2013 ESC MOD DEM MAX INV CONT. MDN-VEL

Angulo de Unidades - Falla y Apertura de un Circuito de Mata de Nance - Veladero



RESULTADOS DE CORTOCIRCUITO

INDICE GENERAL

Año 2010
Análisis de Cortocircuito

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E FRI, DEC 04 2009 14:04
PLAN EXP-SIN CON C.A. JUNIO 2009 SHORT CIRCUIT
AñO 2010 ESC MOD DEM MAX INV FAULT CURRENTS
OUTPUT FOR AREA 6 [PANAMA]

X---------- BUS ----------X			THREE PHASE FAULT /I+/	AN(I+)	ONE PHASE FAULT /IA/	AN(IA)
1	[PAN230	230.00] AMPS	5949.8	-80.02	4878.9	-84.76
2	[PAN115	115.00] AMPS	11659.5	-80.99	8188.9	-87.40
3	[PANII230	230.00] AMPS	5897.8	-80.05	5206.3	-84.57
4	[PANII115	115.00] AMPS	8502.3	-84.13	2871.3	-87.47
5	[CHO230	230.00] AMPS	5030.4	-80.28	4795.1	-84.40
6	[CHO115	115.00] AMPS	3076.7	-93.45	0.0	0.00
8	[LSA230	230.00] AMPS	5465.9	-75.89	4487.4	-76.27
9	[LSA115	115.00] AMPS	4372.9	-83.77	0.0	0.00
11	[M.N230	230.00] AMPS	7197.0	-69.33	5356.1	-66.96
12	[M.N115	115.00] AMPS	6039.6	-68.44	3623.2	-58.36
14	[PRO230	230.00] AMPS	4502.8	-69.95	2633.4	-67.84
15	[PRO115	115.00] AMPS	2991.3	-77.41	0.0	0.00
18	[CAC115	115.00] AMPS	11572.0	-81.11	8180.7	-87.62
19	[C.V115	115.00] AMPS	8051.2	-83.53	3490.2	-88.72
20	[CH.AZUL	115.00] AMPS	1840.9	-74.34	0.0	0.00
21	[C.BAN115	115.00] AMPS	10233.4	-81.18	6362.6	-88.07
23	[CH115	115.00] AMPS	6269.2	-86.92	4145.2	-89.41
26	[LOC115	115.00] AMPS	10522.7	-80.95	6999.3	-87.79
30	[MAR115	115.00] AMPS	9417.4	-81.65	5899.3	-87.60
33	[STM115	115.00] AMPS	10496.3	-81.53	7159.7	-87.43
37	[SAN115	115.00] AMPS	9745.4	-81.67	5393.1	-88.46
48	[TINAJ115	115.00] AMPS	8954.5	-83.36	5370.4	-88.43
50	[M.O115	115.00] AMPS	9499.3	-82.86	5898.5	-88.31
52	[TOC115	115.00] AMPS	6907.1	-85.21	2399.5	-87.61
54	[LM1115	115.00] AMPS	9950.0	-88.89	11593.4	-90.96
55	[LM2115	115.00] AMPS	10017.3	-89.24	11747.8	-91.48
61	[FFIELD	115.00] AMPS	7744.6	-89.08	7907.9	-86.18
85	[PTP230	230.00] AMPS	3210.3	-53.63	3411.2	-46.23
87	[CAL115	115.00] AMPS	6179.3	-65.65	7973.9	-64.55
88	[EST115	115.00] AMPS	5417.5	-64.21	7527.8	-64.31
92	[L.V115	115.00] AMPS	5889.3	-65.07	8132.3	-65.14
96	[FOR230	230.00] AMPS	7880.3	-69.23	8774.3	-70.49
100	[BAY230	230.00] AMPS	4568.7	-82.69	5198.6	-85.51
103	[COPESA23	230.00] AMPS	5126.5	-81.28	4408.3	-84.82
105	[PAN-AM23	230.00] AMPS	4996.7	-80.38	4772.3	-84.51
109	[STA RITA115	115.00] AMPS	9067.9	-88.79	8408.0	-87.03
115	[PACORA23	230.00] AMPS	4828.2	-81.95	4607.1	-85.65
144	[CANJ230	230.00] AMPS	6476.2	-70.29	7178.0	-70.67
145	[BJOMIN230	230.00] AMPS	3570.5	-70.17	2117.5	-67.99
146	[GUALACA230	230.00] AMPS	6201.6	-64.69	7436.3	-66.87
147	[GUASQ230	230.00] AMPS	6756.3	-70.28	7781.9	-71.00
148	[VELADERO 230	230.00] AMPS	6503.9	-72.29	5056.4	-71.33
154	[CEMPAN15	115.00] AMPS	7184.4	-89.05	7174.2	-92.18
190	[CHANG230	230.00] AMPS	2976.2	-57.33	2237.4	-60.51
191	[CHANG115	115.00] AMPS	2356.3	-70.97	2526.9	-71.67
345	[LORENA230	230.00] AMPS	5476.3	-58.23	6564.9	-61.67
511	[LGUIAS230	230.00] AMPS	3589.0	-79.50	3228.1	-82.35
522	[TCATIVÁ 115	115.00] AMPS	9995.1	-89.12	11764.7	-91.45
529	[TCOLON 115	115.00] AMPS	9060.7	-89.01	8460.6	-75.65
6000	[FRONTER	230.00] AMPS	4475.3	-70.10	2519.7	-67.83

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E FRI, DEC 04 2009 14:04
PLAN EXP-SIN CON C.A. JUNIO 2009 SHORT CIRCUIT
AñO 2010 ESC MOD DEM MAX INV FAULT CURRENTS
OUTPUT FOR AREA 7 [ACANAL]

X---------- BUS ----------X			THREE PHASE FAULT /I+/	AN(I+)	ONE PHASE FAULT /IA/	AN(IA)
123	[MIR115	115.00] AMPS	7530.3	-86.00	6743.3	-91.01

Año 2011
Análisis de Cortocircuito

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E FRI, DEC 04 2009 9:50
PLAN EXP-SIN CON C.A. JUNIO 2009 SHORT CIRCUIT
AñO 2011 ESC MOD DEM MAX INV FAULT CURRENTS
OUTPUT FOR AREA 6 [PANAMA]

X---------- BUS ----------X			THREE PHASE FAULT /I+/	AN(I+)	ONE PHASE FAULT /IA/	AN(IA)
1	[PAN230	230.00] AMPS	5323.8	-69.82	4574.4	-76.50
2	[PAN115	115.00] AMPS	10069.4	-70.78	7870.3	-79.02
3	[PANII230	230.00] AMPS	5317.1	-70.33	4892.5	-76.33
4	[PANII115	115.00] AMPS	8604.3	-74.60	3538.1	-81.16
5	[CHO230	230.00] AMPS	4580.3	-69.91	4448.6	-75.89
6	[CHO115	115.00] AMPS	2964.7	-85.55	0.0	0.00
8	[LSA230	230.00] AMPS	5534.0	-62.94	4240.2	-65.76
9	[LSA115	115.00] AMPS	6329.2	-69.43	0.0	0.00
11	[M.N230	230.00] AMPS	8638.8	-53.29	5498.3	-50.80
12	[M.N115	115.00] AMPS	6269.3	-52.02	3696.3	-41.54
14	[PRO230	230.00] AMPS	5832.7	-52.05	2221.6	-48.19
15	[PRO115	115.00] AMPS	3231.0	-58.54	0.0	0.00
18	[CAC115	115.00] AMPS	9999.5	-70.98	7859.2	-79.26
19	[C.V115	115.00] AMPS	7754.7	-74.50	3937.6	-81.96
20	[CH.AZUL	115.00] AMPS	1930.7	-54.85	0.0	0.00
21	[C.BAN115	115.00] AMPS	9066.0	-71.48	6326.4	-80.24
23	[CH115	115.00] AMPS	5710.1	-78.30	3987.0	-82.54
26	[LOC115	115.00] AMPS	9271.0	-71.17	6864.3	-79.79
30	[MAR115	115.00] AMPS	8398.6	-72.15	5786.5	-79.97
33	[STM115	115.00] AMPS	9207.4	-71.65	6923.5	-79.38
37	[SAN115	115.00] AMPS	8718.9	-72.12	5506.1	-80.93
48	[TINAJ115	115.00] AMPS	8026.2	-73.83	5250.1	-80.97
50	[M.O115	115.00] AMPS	8451.8	-73.16	5749.0	-80.66
52	[TOC115	115.00] AMPS	6976.9	-76.53	2844.8	-81.51
54	[LM1115	115.00] AMPS	8684.5	-78.43	10349.3	-81.38
55	[LM2115	115.00] AMPS	8681.7	-78.54	10416.1	-81.61
61	[FFIELD	115.00] AMPS	6965.2	-79.76	7278.4	-78.40
85	[PTP230	230.00] AMPS	4725.6	-52.65	3966.3	-47.71
87	[CAL115	115.00] AMPS	6357.1	-49.21	8182.0	-48.07
88	[EST115	115.00] AMPS	5559.1	-47.75	7714.8	-47.84
92	[L.V115	115.00] AMPS	6052.7	-48.62	8345.0	-48.68
96	[FOR230	230.00] AMPS	9491.9	-53.72	9234.2	-55.60
100	[BAY230	230.00] AMPS	3924.6	-76.13	4619.7	-79.44
103	[COPESA23	230.00] AMPS	4638.7	-72.41	4153.1	-77.38
105	[PAN-AM23	230.00] AMPS	4549.5	-70.03	4428.2	-75.99
109	[STA RITA115	115.00] AMPS	8410.4	-78.02	8628.3	-80.88
115	[PACORA23	230.00] AMPS	4287.3	-73.50	4261.9	-78.29
144	[CANJ230	230.00] AMPS	8015.3	-54.38	6496.5	-54.21
145	[BJOMIN230	230.00] AMPS	4782.1	-51.78	1892.5	-47.51
146	[GUALACA230	230.00] AMPS	7716.4	-48.32	6146.5	-50.60
147	[GUASQ230	230.00] AMPS	8462.6	-54.38	6938.0	-54.39
148	[VELADERO 230	230.00] AMPS	7250.0	-57.21	4931.5	-57.01
154	[CEMPAN15	115.00] AMPS	5732.3	-79.70	6040.4	-83.75
190	[CHANG230	230.00] AMPS	5156.1	-51.28	3618.2	-47.72
191	[CHANG115	115.00] AMPS	3567.7	-55.49	3767.8	-54.87
306	[CHAN1 230	230.00] AMPS	4931.7	-51.02	4230.0	-33.53
310	[CONCEPCION23	230.00] AMPS	6493.4	-52.62	2820.1	-48.99
341	[PRUDENCIA230	230.00] AMPS	5984.7	-37.01	4672.2	-43.87
345	[LORENA230	230.00] AMPS	6754.9	-41.82	5285.1	-46.69
511	[LGUIAS230	230.00] AMPS	4431.4	-66.80	3956.0	-71.06
522	[TCATIVÁ 115	115.00] AMPS	8693.0	-78.54	10460.8	-81.67
529	[TCOLON 115	115.00] AMPS	6325.9	-80.49	4138.5	-54.14
540	[ANTON 230	230.00] AMPS	3621.7	-74.79	2540.4	-75.92
6000	[FRONTER	230.00] AMPS	5557.1	-52.01	2153.8	-48.39

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E FRI, DEC 04 2009 9:50
PLAN EXP-SIN CON C.A. JUNIO 2009 SHORT CIRCUIT
AñO 2011 ESC MOD DEM MAX INV FAULT CURRENTS

OUTPUT FOR AREA 7 [ACANAL]

X---------- BUS ----------X			THREE PHASE FAULT /I+/	AN(I+)	ONE PHASE FAULT /IA/	AN(IA)
123	[MIR115	115.00] AMPS	6985.0	-77.62	6513.8	-83.41

Año 2012
Análisis de Cortocircuito

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E FRI, NOV 27 2009 8:10
PLAN. EXP-SIN - C.A. JUNIO 2009 SHORT CIRCUIT
AñO 2012 ESC MOD DEM MAX INV FAULT CURRENTS

OUTPUT FOR AREA 6 [PANAMA]

X---------- BUS ----------X			THREE PHASE FAULT /I+/	AN(I+)	ONE PHASE FAULT /IA/	AN(IA)
1	[PAN230	230.00] AMPS	6434.1	-71.47	4739.7	-78.53
2	[PAN115	115.00] AMPS	12008.1	-72.48	8601.8	-79.88
3	[PANII230	230.00] AMPS	6367.5	-71.98	5420.4	-78.45
4	[PANII115	115.00] AMPS	9653.4	-77.10	3501.1	-81.40
5	[CHO230	230.00] AMPS	5174.2	-72.09	4605.3	-78.37
6	[CHO115	115.00] AMPS	3034.3	-87.24	0.0	0.00
8	[LSA230	230.00] AMPS	6327.4	-65.09	4291.2	-67.59
9	[LSA115	115.00] AMPS	6734.2	-71.95	3845.2	-76.67
11	[M.N230	230.00] AMPS	9434.4	-54.09	6192.1	-50.55
12	[M.N115	115.00] AMPS	6327.4	-52.80	3739.9	-42.24
14	[PRO230	230.00] AMPS	6320.5	-53.85	4112.7	-54.11
15	[PRO115	115.00] AMPS	3310.2	-60.13	0.0	0.00
18	[CAC115	115.00] AMPS	11888.5	-72.70	8668.8	-79.99
19	[C.V115	115.00] AMPS	8595.2	-76.70	3882.0	-81.92
20	[CH.AZUL	115.00] AMPS	1962.2	-56.28	0.0	0.00
21	[C.BAN115	115.00] AMPS	10492.2	-73.26	6216.6	-79.13
23	[CH115	115.00] AMPS	6146.8	-79.85	4113.9	-83.36
26	[LOC115	115.00] AMPS	10792.8	-72.90	6984.4	-78.48
30	[MAR115	115.00] AMPS	9625.7	-73.80	6028.2	-79.72
33	[STM115	115.00] AMPS	10776.8	-73.31	7465.9	-80.14
37	[SAN115	115.00] AMPS	9990.9	-73.98	5416.8	-80.13
48	[TINAJ115	115.00] AMPS	9159.2	-75.56	5531.8	-81.58
50	[M.O115	115.00] AMPS	9731.5	-74.91	6098.6	-81.34
52	[TOC115	115.00] AMPS	7620.6	-78.82	2812.5	-81.82
54	[LM1115	115.00] AMPS	9625.4	-80.67	11736.7	-83.80
55	[LM2115	115.00] AMPS	9591.0	-80.62	11710.7	-83.77
61	[FFIELD	115.00] AMPS	7539.4	-81.74	7927.2	-79.91
85	[PTP230	230.00] AMPS	4957.0	-52.83	0.0	0.00
87	[CAL115	115.00] AMPS	6346.1	-49.94	8265.7	-49.04
88	[EST115	115.00] AMPS	5551.7	-48.47	7684.4	-48.56
92	[L.V115	115.00] AMPS	6043.2	-49.35	8327.4	-49.39
96	[FOR230	230.00] AMPS	10229.4	-54.10	10646.4	-52.88
100	[BAY230	230.00] AMPS	4826.9	-78.16	5373.3	-81.46
103	[COPESA23	230.00] AMPS	5458.2	-74.23	5170.9	-79.63
105	[PAN-AM23	230.00] AMPS	5134.0	-72.21	4586.3	-78.47
109	[STA RITA115	115.00] AMPS	9895.8	-80.61	9146.3	-82.37
115	[PACORA23	230.00] AMPS	5017.1	-75.34	4825.8	-80.12
144	[CANJ230	230.00] AMPS	8510.2	-54.92	7711.5	-54.03
145	[BJOMIN230	230.00] AMPS	5079.3	-53.49	3921.4	-55.12
146	[GUALACA230	230.00] AMPS	8140.4	-48.15	7723.8	-49.10
147	[GUASQ230	230.00] AMPS	9017.3	-54.96	8387.5	-54.28
148	[VELADERO 230	230.00] AMPS	8035.4	-58.84	5302.6	-58.19
149	[BBLANCO	230.00] AMPS	6726.7	-59.43	0.0	0.00
154	[CEMPAN15	115.00] AMPS	6131.4	-81.32	6113.1	-85.16
190	[CHANG230	230.00] AMPS	5672.1	-51.36	3479.9	-50.71
191	[CHANG115	115.00] AMPS	3510.8	-55.91	3961.4	-55.89
306	[CHAN1 230	230.00] AMPS	5702.1	-50.65	6158.9	-47.43
310	[CONCEPCION23	230.00] AMPS	7482.3	-54.04	3839.9	-50.90
311	[PANDO230	230.00] AMPS	5730.3	-53.53	0.0	0.00
341	[PRUDENCIA230	230.00] AMPS	6124.9	-35.19	5844.4	-35.53
345	[LORENA230	230.00] AMPS	7034.1	-41.00	6677.5	-41.34
511	[LGUIAS230	230.00] AMPS	4852.3	-69.16	3863.6	-73.26
522	[TCATIVÁ 115	115.00] AMPS	9607.8	-80.64	11738.6	-83.83

529	[TCOLON 115	115.00]	AMPS	8108.0	-83.56	0.0	0.00
540	[ANTON 230	230.00]	AMPS	3942.6	-73.61	2514.1	-73.53
606	[PAN230	230.00]	AMPS	1051.1	-91.69	0.0	0.00
6000	[FRONTER	230.00]	AMPS	5947.0	-53.99	3677.4	-53.53

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E FRI, NOV 27 2009 8:10
PLAN. EXP-SIN - C.A. JUNIO 2009 SHORT CIRCUIT
AñO 2012 ESC MOD DEM MAX INV FAULT CURRENTS
OUTPUT FOR AREA 7 [ACANAL]

				THREE PHASE FAULT		ONE PHASE FAULT	
X---------- BUS ----------X				/I+/	AN(I+)	/IA/	AN(IA)
123	[MIR115	115.00]	AMPS	7657.5	-79.33	6947.7	-84.53

Año 2013
Análisis de Cortocircuito

PTI INTERACTIVE POWER SYSTEM SIMULATOR--PSS(R)E THU, DEC 03 2009 14:32
PLAN. EXP-SIN - C.A. JUNIO 2009 SHORT CIRCUIT
AñO 2013 ESC MOD DEM MAX INV FAULT CURRENTS
OUTPUT FOR AREA 6 [PANAMA]

				THREE PHASE FAULT		ONE PHASE FAULT	
X---------- BUS ----------X				/I+/	AN(I+)	/IA/	AN(IA)
1	[PAN230	230.00]	AMPS	6496.8	-73.56	4838.4	-80.62
2	[PAN115	115.00]	AMPS	12125.1	-74.38	8779.1	-81.76
3	[PANII230	230.00]	AMPS	6423.5	-73.98	5520.0	-80.46
4	[PANII115	115.00]	AMPS	9733.0	-78.85	3607.6	-83.29
5	[CHO230	230.00]	AMPS	5260.5	-74.61	4713.0	-80.89
6	[CHO115	115.00]	AMPS	3120.4	-89.80	0.0	0.00
8	[LSA230	230.00]	AMPS	6431.9	-69.18	4396.8	-71.76
9	[LSA115	115.00]	AMPS	6871.6	-76.05	3963.2	-80.82
11	[M.N230	230.00]	AMPS	9441.5	-60.19	6204.3	-56.70
12	[M.N115	115.00]	AMPS	6327.7	-59.37	3740.7	-48.82
14	[PRO230	230.00]	AMPS	6321.1	-59.91	4114.9	-60.20
15	[PRO115	115.00]	AMPS	3312.5	-66.22	0.0	0.00
18	[CAC115	115.00]	AMPS	12007.1	-74.59	8846.7	-81.86
19	[C.V115	115.00]	AMPS	8706.7	-78.50	3994.5	-83.79
20	[CH.AZUL	115.00]	AMPS	1963.7	-62.38	0.0	0.00
21	[C.BAN115	115.00]	AMPS	10615.2	-75.14	6364.1	-81.01
23	[CH115	115.00]	AMPS	6258.9	-81.46	4210.6	-85.01
26	[LOC115	115.00]	AMPS	10914.9	-74.79	7142.8	-80.37
30	[MAR115	115.00]	AMPS	9757.0	-75.69	6171.4	-81.60
33	[STM115	115.00]	AMPS	10904.5	-75.21	7629.5	-82.03
37	[SAN115	115.00]	AMPS	10114.9	-75.85	5551.8	-82.00
48	[TINAJ115	115.00]	AMPS	9293.3	-77.44	5665.4	-83.49
50	[M.O115	115.00]	AMPS	9864.4	-76.79	6241.9	-83.24
52	[TOC115	115.00]	AMPS	7730.3	-80.58	2902.3	-83.72
54	[LM1115	115.00]	AMPS	9736.2	-81.87	11899.9	-85.00
55	[LM2115	115.00]	AMPS	9700.9	-81.81	11872.6	-84.96
61	[FFIELD	115.00]	AMPS	7645.3	-82.95	8060.4	-81.17
85	[PTP230	230.00]	AMPS	4952.0	-59.15	0.0	0.00
87	[CAL115	115.00]	AMPS	6333.1	-56.65	8249.0	-55.75
88	[EST115	115.00]	AMPS	5536.7	-55.20	7663.8	-55.29
92	[L.V115	115.00]	AMPS	6030.6	-56.07	8310.1	-56.11
96	[FOR230	230.00]	AMPS	10197.1	-60.33	10619.5	-59.13
100	[BAY230	230.00]	AMPS	4849.1	-79.30	5413.6	-82.62
103	[COPESA23	230.00]	AMPS	5515.6	-76.10	5259.7	-81.51
105	[PAN-AM23	230.00]	AMPS	5220.3	-74.73	4693.8	-80.99
109	[STA RITA115	115.00]	AMPS	10017.9	-81.83	9306.6	-83.65
115	[PACORA23	230.00]	AMPS	5070.9	-77.10	4904.8	-81.90
144	[CANJ230	230.00]	AMPS	8514.6	-61.07	7722.4	-60.21
145	[BJOMIN230	230.00]	AMPS	5076.6	-59.46	3920.4	-61.10
146	[GUALACA230	230.00]	AMPS	8141.7	-54.36	7731.7	-55.32
147	[GUASQ230	230.00]	AMPS	9021.7	-61.11	8399.3	-60.46
148	[VELADERO 230	230.00]	AMPS	8114.3	-64.29	5374.4	-63.72
149	[BBLANCO	230.00]	AMPS	6804.5	-64.82	0.0	0.00
154	[CEMPAN15	115.00]	AMPS	6236.0	-82.73	6235.3	-86.60
190	[CHANG230	230.00]	AMPS	5634.7	-57.94	3457.7	-57.31

191	[CHANG115	115.00]	AMPS	3482.5	-62.74	3929.2	-62.74
306	[CHAN1 230	230.00]	AMPS	5653.4	-57.18	6106.8	-53.97
310	[CONCEPCION23	230.00]	AMPS	7482.6	-60.17	3843.0	-57.07
311	[PANDO230	230.00]	AMPS	5727.8	-59.71	0.0	0.00
341	[PRUDENCIA230	230.00]	AMPS	6125.1	-41.48	5848.5	-41.83
345	[LORENA230	230.00]	AMPS	7033.8	-47.27	6682.2	-47.62
511	[LGUIAS230	230.00]	AMPS	4951.8	-72.61	3966.2	-76.75
522	[TCATIVÁ 115	115.00]	AMPS	9718.1	-81.84	11901.2	-85.02
529	[TCOLON 115	115.00]	AMPS	8242.8	-84.62	0.0	0.00
540	[ANTON 230	230.00]	AMPS	4041.8	-77.21	2589.9	-77.22
606	[PAN230	230.00]	AMPS	1080.7	-93.86	0.0	0.00
6000	[FRONTER	230.00]	AMPS	5950.6	-60.11	3681.2	-59.67

OUTPUT FOR AREA 7 [ACANAL]

				THREE PHASE FAULT		ONE PHASE FAULT	
X---------- BUS ----------X				/I+/	AN(I+)	/IA/	AN(IA)
123	[MIR115	115.00]	AMPS	7795.9	-81.06	7102.8	-86.27