

ANEXO 9
CONFIABILIDAD



de

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de

1. Estadística de Fallas en Líneas a 115 kV

N	Elemento	Barra 1	Barra 2	km	Salida	Entrada	Tiempo en Falla [h]	Tiempo en Operación [h]
1	lne_109_110_1	COLON115	PTMD115A	21.00	25-04-00 00:00	25-04-00 00:27	0.4500	
2	lne_109_110_1	COLON115	PTMD115A	21.00	22-04-02 00:00	22-04-02 00:03	0.0500	17,447.55
3	lne_109_110_1	COLON115	PTMD115A	21.00	29-04-03 00:00	29-04-03 00:02	0.0333	8,927.95
4	lne_109_110_1	COLON115	PTMD115A	21.00	01-08-03 00:00	01-08-03 00:01	0.0167	2,255.97
5	lne_109_111_2	COLON115	PTMD115B	21.00	24-03-00 00:00	24-03-00 03:50	3.8333	
6	lne_109_111_2	COLON115	PTMD115B	21.00	03-03-01 00:00	03-03-01 01:55	1.9167	8,252.17
7	lne_109_111_2	COLON115	PTMD115B	21.00	29-06-01 00:00	29-06-01 00:04	0.0667	2,830.08
8	lne_12_87_1	M_N115	CAL115	24.98	01-11-02 00:00	01-11-02 00:02	0.0333	11,759.93
9	lne_12_87_1	M_N115	CAL115	24.98	10-08-05 00:00	10-08-05 00:01	0.0167	24,311.97
10	lne_12_87_2	M_N115	CAL115	24.98	12-09-02 00:00	12-09-02 00:02	0.0333	
11	lne_12_87_2	M_N115	CAL115	24.98	23-08-03 00:00	23-08-03 00:02	0.0333	8,279.97
12	lne_12_87_2	M_N115	CAL115	24.98	15-06-04 00:00	15-06-04 00:01	0.0167	7,127.97
13	lne_12_87_2	M_N115	CAL115	24.98	16-09-04 00:00	16-09-04 00:02	0.0333	2,231.98
14	lne_15_20_1	PRO115	CH_AZUL	30.00	03-10-03 00:00	03-10-03 02:49	2.8167	
15	lne_15_20_1	PRO115	CH_AZUL	30.00	04-10-03 00:00	04-10-03 04:00	4.0000	21.18
16	lne_15_20_1	PRO115	CH_AZUL	30.00	12-10-03 00:00	12-10-03 03:25	3.4167	188.00
17	lne_15_20_1	PRO115	CH_AZUL	30.00	22-10-03 00:00	22-10-03 00:12	0.2000	236.58
18	lne_15_20_1	PRO115	CH_AZUL	30.00	09-02-04 00:00	09-02-04 00:05	0.0833	2,639.80
19	lne_15_20_1	PRO115	CH_AZUL	30.00	19-02-04 00:00	19-02-04 00:04	0.0667	239.92
20	lne_15_20_1	PRO115	CH_AZUL	30.00	25-02-04 00:00	25-02-04 00:04	0.0667	143.93
21	lne_15_20_1	PRO115	CH_AZUL	30.00	12-06-04 00:00	12-06-04 00:03	0.0500	2,591.93
22	lne_15_20_1	PRO115	CH_AZUL	30.00	25-08-04 00:00	25-08-04 00:22	0.3667	1,775.95
23	lne_15_20_1	PRO115	CH_AZUL	30.00	28-08-04 00:00	28-08-04 00:08	0.1333	71.63
24	lne_15_20_1	PRO115	CH_AZUL	30.00	29-08-04 00:00	29-08-04 00:15	0.2500	23.87
25	lne_15_20_1	PRO115	CH_AZUL	30.00	08-12-04 00:00	08-12-04 00:02	0.0333	2,423.75
26	lne_15_20_1	PRO115	CH_AZUL	30.00	15-02-05 00:00	15-02-05 00:03	0.0500	1,655.97
27	lne_15_20_1	PRO115	CH_AZUL	30.00	11-11-05 00:00	11-11-05 00:02	0.0333	6,455.95
28	lne_15_20_1	PRO115	CH_AZUL	30.00	16-12-05 00:00	16-12-05 00:08	0.1333	839.97
29	lne_18_110_1	CAC115	PTMD115A	26.00	05-07-03 00:00	05-07-03 11:36	11.6000	
30	lne_18_110_1	CAC115	PTMD115A	26.00	18-08-03 00:00	18-08-03 00:03	0.0500	1,044.40
31	lne_18_110_1	CAC115	PTMD115A	26.00	14-01-04 00:00	14-01-04 17:21	17.3500	3,575.95
32	lne_18_110_1	CAC115	PTMD115A	26.00	19-06-05 00:00	19-06-05 00:01	0.0167	12,510.65
33	lne_18_111_2	CAC115	PTMD115B	26.00	17-12-00 00:00	17-12-00 00:09	0.1500	
34	lne_18_111_2	CAC115	PTMD115B	26.00	05-03-01 01:00	05-03-01 01:01	0.0167	1,872.85
35	lne_18_111_2	CAC115	PTMD115B	26.00	15-08-01 00:00	15-08-01 04:16	4.2667	3,910.98
36	lne_18_111_2	CAC115	PTMD115B	26.00	13-02-03 00:00	13-02-03 00:08	0.1333	13,123.73
37	lne_18_111_2	CAC115	PTMD115B	26.00	04-08-04 00:00	04-08-04 00:02	0.0333	12,911.87
38	lne_19_37_1	C_V115	SAN115	11.00	01-11-01 00:00	01-11-01 00:03	0.0500	
39	lne_2_154_4A	PAN115	CEMPAN15	40.70	31-12-00 00:00	31-12-00 00:04	0.0667	
40	lne_2_154_4A	PAN115	CEMPAN15	40.70	05-03-01 00:00	05-03-01 00:08	0.1333	1,535.93
41	lne_2_154_4A	PAN115	CEMPAN15	40.70	29-03-02 00:00	29-03-02 00:01	0.0167	9,335.87

N	Elemento	Barra 1	Barra 2	km	Salida	Entrada	Tiempo en Falla [h]	Tiempo en Operación [h]
42	lne_2_154_4A	PAN115	CEMPAN15	40.70	28-03-03 00:00	28-03-03 00:02	0.0333	8,735.98
43	lne_2_154_4A	PAN115	CEMPAN15	40.70	13-06-03 00:00	13-06-03 00:05	0.0833	1,847.97
44	lne_2_154_4A	PAN115	CEMPAN15	40.70	17-09-03 00:00	17-09-03 00:03	0.0500	2,303.92
45	lne_2_154_4A	PAN115	CEMPAN15	40.70	01-11-03 00:00	02-11-03 04:32	28.5333	1,079.95
46	lne_2_154_4A	PAN115	CEMPAN15	40.70	23-05-04 00:00	23-05-04 03:50	3.8333	4,867.47
47	lne_2_154_4A	PAN115	CEMPAN15	40.70	04-03-05 00:00	04-03-05 00:01	0.0167	6,836.17
48	lne_2_18_1	PAN115	CAC115	0.80	12-05-05 00:00	12-05-05 00:05	0.0833	
49	lne_2_18_1	PAN115	CAC115	0.80	28-06-05 00:00	28-06-05 00:19	0.3167	1,127.92
50	lne_2_23_3A	PAN115	CH115	22.50	02-03-00 00:00	02-03-00 00:18	0.3000	
51	lne_2_23_3A	PAN115	CH115	22.50	28-03-00 01:00	28-03-00 01:04	0.0667	624.70
52	lne_2_23_3A	PAN115	CH115	22.50	13-08-00 00:00	13-08-00 00:05	0.0833	3,310.93
53	lne_2_23_3A	PAN115	CH115	22.50	07-03-02 00:00	07-03-02 00:03	0.0500	13,703.92
54	lne_2_23_3A	PAN115	CH115	22.50	05-06-03 00:00	05-06-03 00:05	0.0833	10,919.95
55	lne_2_23_3A	PAN115	CH115	22.50	14-06-03 01:00	14-06-03 16:56	15.9333	216.92
56	lne_2_23_3A	PAN115	CH115	22.50	13-02-04 00:00	13-02-04 00:06	0.1000	5,839.07
57	lne_2_23_3A	PAN115	CH115	22.50	05-06-04 01:00	05-06-04 01:07	0.1167	2,712.90
58	lne_2_23_3A	PAN115	CH115	22.50	26-09-04 01:00	26-09-04 01:19	0.3167	2,711.88
59	lne_2_23_3A	PAN115	CH115	22.50	11-10-04 00:00	11-10-04 00:05	0.0833	358.68
60	lne_2_23_3A	PAN115	CH115	22.50	01-03-05 00:00	01-03-05 00:02	0.0333	3,383.92
61	lne_2_23_3A	PAN115	CH115	39.00	22-03-06 00:00	22-03-06 00:04	0.0789	9,263.97
62	lne_2_23_3A	PAN115	CH115	39.00	12-05-06 00:00	12-05-06 00:01	0.0311	1,223.92
63	lne_2_33_1	PAN115	STM115	1.40	27-08-00 00:00	27-08-00 00:41	0.6833	
64	lne_23_55_3B	CH115	LM2115	31.50	28-03-00 00:00	28-03-00 00:12	0.2000	
65	lne_23_55_3B	CH115	LM2115	31.50	29-03-00 00:00	29-03-00 00:14	0.2333	23.80
66	lne_23_55_3B	CH115	LM2115	31.50	17-06-00 00:00	17-06-00 00:04	0.0667	1,919.77
67	lne_23_55_3B	CH115	LM2115	31.50	26-05-01 00:00	26-05-01 00:06	0.1000	8,231.93
68	lne_23_55_3B	CH115	LM2115	31.50	20-03-02 00:00	20-03-02 00:08	0.1333	7,151.90
69	lne_23_55_3B	CH115	LM2115	31.50	22-08-02 00:00	22-08-02 00:07	0.1167	3,719.87
70	lne_23_55_3B	CH115	LM2115	31.50	28-02-03 00:00	28-02-03 00:06	0.1000	4,559.88
71	lne_23_55_3B	CH115	LM2115	31.50	14-06-03 00:00	14-06-03 00:06	0.1000	2,543.90
72	lne_23_55_3B	CH115	LM2115	31.50	05-06-04 00:00	05-06-04 00:03	0.0500	8,567.90
73	lne_23_55_3B	CH115	LM2115	31.50	26-09-04 00:00	26-09-04 00:03	0.0500	2,711.95
74	lne_23_55_3B	CH115	LM2115	31.50	28-09-04 00:00	28-09-04 00:03	0.0500	47.95
75	lne_23_55_3B	CH115	LM2115	31.50	23-03-06 00:00	23-03-06 00:07	0.1269	12,983.95
76	lne_23_55_3B	CH115	LM2115	31.50	23-03-06 01:00	23-03-06 02:23	1.3911	0.87
77	lne_54_109_1	LM1115	COLON115	6.20	20-07-01 00:00	20-07-01 00:08	0.1333	
78	lne_54_109_1	LM1115	COLON115	6.20	01-09-01 00:00	01-09-01 00:02	0.0333	1,031.87
79	lne_54_109_1	LM1115	COLON115	6.20	28-02-02 00:00	28-02-02 00:06	0.1000	4,319.97
80	lne_54_109_1	LM1115	COLON115	6.20	24-05-02 00:00	24-05-02 00:03	0.0500	2,039.90
81	lne_54_109_1	LM1115	COLON115	6.20	30-07-03 00:00	30-07-03 00:05	0.0833	10,367.95
82	lne_54_109_1	LM1115	COLON115	6.20	15-08-03 00:00	15-08-03 00:03	0.0500	383.92
83	lne_54_109_2	LM1115	COLON115	6.20	13-05-00 00:00	13-05-00 00:02	0.0333	
84	lne_54_109_2	LM1115	COLON115	6.20	17-03-01 00:00	17-03-01 08:49	8.8167	7,391.97

N	Elemento	Barra 1	Barra 2	km	Salida	Entrada	Tiempo en Falla [h]	Tiempo en Operación [h]
85	lne_54_109_2	LM1115	COLON115	6.20	20-08-04 00:00	20-08-04 00:01	0.0167	30,039.18
86	lne_55_154_4B	LM2115	CEMPAN15	16.70	04-08-00 00:00	04-08-00 00:08	0.1333	
87	lne_55_154_4B	LM2115	CEMPAN15	16.70	11-03-01 00:00	11-03-01 00:03	0.0500	5,255.87
88	lne_55_154_4B	LM2115	CEMPAN15	16.70	11-11-03 00:00	11-11-03 01:00	1.0000	23,399.95
89	lne_55_154_4B	LM2115	CEMPAN15	16.70	28-07-04 00:00	28-07-04 00:37	0.6167	6,239.00
90	lne_55_154_4B	LM2115	CEMPAN15	16.70	07-09-04 00:00	07-09-04 00:08	0.1333	983.38
91	lne_55_154_4B	LM2115	CEMPAN15	16.70	21-02-05 00:00	21-02-05 00:01	0.0167	4,007.87
92	lne_55_154_4B	LM2115	CEMPAN15	16.70	01-11-05 00:00	01-11-05 00:18	0.3000	6,071.98
93	lne_55_154_4B	LM2115	CEMPAN15	16.70	02-11-06 00:00	02-11-06 00:03	0.0589	8,783.70
94	lne_87_88_1	CAL115	EST115	5.80	03-08-00 00:00	03-08-00 00:09	0.1500	
95	lne_87_88_1	CAL115	EST115	5.80	06-08-04 00:00	06-08-04 00:03	0.0500	35,135.85



Handwritten signature or initials.

2. Estadística de Fallas en Líneas a 230 kV

n	Elemento	Barra 1	Barra 2	km	Salida	Entrada	Tiempo en Falla [h]	Tiempo en Operación [h]
1	lne_1_5_1	PAN230	CHO230	39.00	15-03-03 00:00	15-03-03 09:24	9.4000	
2	lne_1_5_1	PAN230	CHO230	39.00	29-07-04 00:00	29-07-04 00:05	0.0833	12,038.60
3	lne_1_5_1	PAN230	CHO230	39.00	15-09-05 00:00	15-09-05 00:01	0.0167	9,911.92
4	lne_1_5_2	PAN230	CHO230	39.00	18-10-00 00:00	18-10-00 00:01	0.0167	
5	lne_1_5_2	PAN230	CHO230	39.00	03-07-01 00:00	03-07-01 00:01	0.0167	6,191.98
6	lne_1_5_2	PAN230	CHO230	39.00	01-10-01 00:00	01-10-01 00:03	0.0500	2,159.98
7	lne_1_5_2	PAN230	CHO230	39.00	24-08-02 00:00	24-08-02 00:01	0.0167	7,847.95
8	lne_1_5_2	PAN230	CHO230	39.00	22-11-02 00:00	22-11-02 00:01	0.0167	2,159.98
9	lne_1_5_2	PAN230	CHO230	39.00	01-08-04 00:00	01-08-04 03:20	3.3333	14,831.98
10	lne_1_5_2	PAN230	CHO230	39.00	20-08-04 00:00	20-08-04 03:28	3.4667	452.67
11	lne_100_103_2A	BAY230	COPESA23	58.14	14-04-00 00:00	14-04-00 00:01	0.0167	
12	lne_100_103_2A	BAY230	COPESA23	58.14	09-12-00 00:00	09-12-00 13:45	13.7500	5,735.98
13	lne_100_103_2A	BAY230	COPESA23	58.14	28-07-02 00:00	28-07-02 00:12	0.2000	14,290.25
14	lne_100_103_2A	BAY230	COPESA23	58.14	22-08-02 00:00	22-08-02 00:26	0.4333	599.80
15	lne_100_103_2A	BAY230	COPESA23	58.14	08-07-03 00:00	08-07-03 00:01	0.0167	7,679.57
16	lne_100_115_1A	BAY230	PACORA23	49.14	25-03-00 00:00	25-03-00 00:01	0.0167	
17	lne_100_115_1A	BAY230	PACORA23	49.14	15-03-03 00:00	15-03-03 02:08	2.1333	26,039.98
18	lne_100_115_1A	BAY230	PACORA23	49.14	16-03-03 00:00	16-03-03 06:53	6.8833	21.87
19	lne_100_115_1A	BAY230	PACORA23	49.14	17-03-03 00:00	17-03-03 08:00	8.0000	17.12
20	lne_11_14_9	M_N230	PRO230	54.00	18-09-01 00:00	18-09-01 00:06	0.1000	
21	lne_11_14_9	M_N230	PRO230	54.00	09-10-01 00:00	09-10-01 00:05	0.0833	503.90
22	lne_11_14_9	M_N230	PRO230	54.00	09-10-01 01:00	09-10-01 01:06	0.1000	0.92
23	lne_11_14_9	M_N230	PRO230	54.00	14-11-01 00:00	14-11-01 00:01	0.0167	862.90
24	lne_11_14_9	M_N230	PRO230	54.00	19-10-02 00:00	19-10-02 00:01	0.0167	8,135.98
25	lne_11_14_9	M_N230	PRO230	54.00	08-09-05 00:00	08-09-05 00:06	0.1000	25,319.98
26	lne_11_14_9	M_N230	PRO230	54.00	17-05-06 00:00	17-05-06 00:00	0.0139	6,023.90
27	lne_11_14_9	M_N230	PRO230	54.00	03-07-06 00:00	03-07-06 00:01	0.0267	1,127.99
28	lne_11_148_1	M_N230	VELAD230	84.49	25-08-02 00:00	25-08-02 00:01	0.0167	
29	lne_11_148_2	M_N230	VELAD230	84.49	27-01-06 00:00	27-01-06 11:00	11.0142	
30	lne_11_96_1	M_N230	FOR230	37.50	27-08-00 00:00	27-08-00 00:41	0.6833	
31	lne_11_96_2	M_N230	FOR230	37.50	28-04-03 00:00	28-04-03 00:02	0.0333	
32	lne_14_6000_10	PRO230	FRONTER	9.70	09-01-06 00:00	09-01-06 00:16	0.2697	
33	lne_3_103_2B	PANII230	COPESA23	10.00	15-07-00 00:00	15-07-00 00:04	0.0667	
34	lne_3_115_1B	PANII230	PACORA23	19.00	25-03-00 01:00	25-03-00 01:01	0.0167	
35	lne_3_115_1B	PANII230	PACORA23	19.00	20-04-02 00:00	20-04-02 02:53	2.8833	18,142.98
36	lne_3_115_1B	PANII230	PACORA23	19.00	06-10-05 00:00	06-10-05 00:04	0.0667	30,357.12
37	lne_5_8_1	CHO230	LSA230	142.19	11-06-03 00:00	11-06-03 00:01	0.0167	
38	lne_5_8_1	CHO230	LSA230	142.19	21-09-04 00:00	21-09-04 00:03	0.0500	11,231.98
39	lne_5_8_1	CHO230	LSA230	142.19	02-08-06 00:00	02-08-06 00:04	0.0744	16,319.95
40	lne_5_8_1	CHO230	LSA230	142.19	11-08-06 00:00	11-08-06 00:01	0.0186	215.93
41	lne_5_8_2	CHO230	LSA230	142.19	05-08-00 00:00	05-08-00 00:01	0.0167	

n	Elemento	Barra 1	Barra 2	km	Salida	Entrada	Tiempo en Falla [h]	Tiempo en Operación [h]
42	lne_5_8_2	CHO230	LSA230	142.19	07-11-01 00:00	07-11-01 00:02	0.0333	11,015.98
43	lne_5_8_2	CHO230	LSA230	142.19	15-03-03 00:00	15-03-03 05:11	5.1833	11,831.97
44	lne_5_8_2	CHO230	LSA230	142.19	24-06-03 00:00	24-06-03 00:01	0.0167	2,418.82
45	lne_5_8_2	CHO230	LSA230	142.19	27-08-04 00:00	27-08-04 00:15	0.2500	10,319.98
46	lne_5_8_2	CHO230	LSA230	142.19	31-08-04 00:00	31-08-04 00:04	0.0667	95.75
47	lne_5_8_2	CHO230	LSA230	142.19	20-02-05 00:00	20-02-05 00:07	0.1167	4,151.93
48	lne_5_8_2	CHO230	LSA230	142.19	13-02-06 00:00	13-02-06 00:00	0.0089	8,591.88
49	lne_8_148_1	LSA230	VELAD230	109.36	13-09-01 00:00	13-09-01 00:26	0.4333	
50	lne_8_148_1	LSA230	VELAD230	109.36	22-03-02 00:00	22-03-02 00:01	0.0167	4,559.57
51	lne_8_148_1	LSA230	VELAD230	109.36	09-03-05 00:00	09-03-05 02:27	2.4500	25,991.98
52	lne_8_148_2	LSA230	VELAD230	109.36	05-10-03 00:00	05-10-03 00:01	0.0167	
53	lne_8_148_2	LSA230	VELAD230	109.36	01-11-03 00:00	01-11-03 00:02	0.0333	647.98
54	lne_8_148_2	LSA230	VELAD230	109.36	06-11-04 00:00	06-11-04 00:03	0.0500	8,903.97
55	lne_8_148_3	LSA230	VELAD230	110.07	05-09-04 00:00	05-09-04 00:01	0.0167	
56	lne_8_148_3	LSA230	VELAD230	110.07	03-02-05 00:00	03-02-05 01:02	1.0333	3,623.98
57	lne_96_147_1	FOR230	GUASQ230	16.00	22-08-03 00:00	22-08-03 00:07	0.1167	
58	lne_96_147_1	FOR230	GUASQ230	16.00	08-05-05 00:00	08-05-05 00:00	0.0000	14,999.88



de

3. Estadística de Fallas Simultáneas en Líneas a 115 kV

bus i, c1	bus j, c1	N	bus i, c2	bus j, c2	n	salida	entrada
PAN115	CEMPAN15	L1	PAN115	CH115	L1	28-05-00 00:00	28-05-00 00:25
PAN115	CEMPAN15	L1	CH115	LM2115	L2	05-10-00 00:00	05-10-00 00:39
PAN115	CH115	L1	LM2115	CEMPAN15	L1	12-10-00 00:00	12-10-00 00:04
PAN115	CEMPAN15	L1	CH115	LM2115	L2	12-10-00 01:00	12-10-00 01:03
PAN115	CH115	L1	LM2115	CEMPAN15	L2	03-11-00 00:00	03-11-00 00:04
COLON115	PTMD115B	L1	CAC115	PTMD115A	L2	29-06-01 00:00	29-06-01 00:04
COLON115	PTMD115A	L2	LM1115	COLON115	L1	30-07-01 00:00	30-07-01 00:03
PAN115	CEMPAN15	L1	PAN115	CH115	L1	10-12-01 00:00	10-12-01 00:09
CAC115	PTMD115A	L1	LM1115	COLON115	L1	21-12-01 00:00	21-12-01 00:13
PAN115	CEMPAN15	L1	PAN115	CH115	L1	08-08-02 00:00	08-08-02 00:07
M_N115	CAL115	L1	CAL115	EST115	L1	30-09-02 00:00	30-09-02 00:15
M_N115	CAL115	L1	M_N115	CAL115	L1	10-11-02 00:00	10-11-02 00:05
PAN115	CH115	L1	LM2115	CEMPAN15	L2	22-11-02 00:00	22-11-02 00:06
PAN115	CEMPAN15	L1	LM2115	CEMPAN15	L1	28-03-03 01:00	28-03-03 01:09
LM1115	COLON115	L1	LM1115	COLON115	L2	10-05-03 00:00	10-05-03 00:26
CAL115	EST115	L1	CAL115	L_V115	L2	24-08-03 00:00	24-08-03 00:02
M_N115	CAL115	L1	CAL115	L_V115	L1	29-09-03 00:00	29-09-03 00:02
PAN115	CEMPAN15	L1	PAN115	CH115	L2	04-08-04 00:00	04-08-04 00:23
M_N115	CAL115	L1	M_N115	CAL115	L1	05-09-04 00:00	05-09-04 00:06
M_N115	CAL115	L1	M_N115	CAL115	L1	24-09-04 00:00	24-09-04 00:04
PAN115	CEMPAN15	L1	PAN115	CH115	L1	31-03-05 00:00	31-03-05 00:06
PAN115	CEMPAN15	L1	PAN115	CH115	L2	09-09-05 00:00	09-09-05 00:02
PAN115	CH115	L1	CH115	LM2115	L1	09-11-05 00:00	09-11-05 00:06
CH115	LM2115	L1	LM2115	CEMPAN15	L2	16-04-06 00:00	16-04-06 00:50
M_N115	CAL115	L1	M_N115	CAL115	L1	11-09-06 00:00	11-09-06 01:03
CAL115	EST115	L1	CAL115	L_V115	L2	31-10-06 00:00	31-10-06 02:33



4. Estadística de Fallas Simultáneas en Líneas a 230 kV

bus i, c1	bus j, c1	N	bus i, c2	bus j, c2	n	salida	entrada
LSA230	VELAD230	L1	LSA230	VELAD230	L2	26-06-00 00:00	26-06-00 01:08
PAN230	CHO230	L2	PAN230	CHO230	L1	27-09-00 00:00	27-09-00 00:28
CHO230	LSA230	L1	CHO230	LSA230	L2	06-08-01 00:00	06-08-01 00:01
BAY230	PACORA23	L1	PANII230	PACORA23	L1	18-08-01 00:00	18-08-01 00:21
M_N230	VELAD230	L1	M_N230	VELAD230	L1	20-10-01 00:00	20-10-01 00:34
CHO230	LSA230	L1	CHO230	LSA230	L2	15-03-03 00:00	15-03-03 06:44
BAY230	COPESA23	L1	BAY230	PACORA23	L2	16-03-03 00:00	16-03-03 04:41
BAY230	COPESA23	L1	BAY230	PACORA23	L2	17-03-03 00:00	17-03-03 01:08
CHO230	LSA230	L1	CHO230	LSA230	L2	25-07-03 00:00	25-07-03 00:02
CHO230	LSA230	L1	CHO230	LSA230	L2	11-03-04 00:00	11-03-04 01:36
PAN230	CHO230	L1	PAN230	CHO230	L2	09-08-04 00:00	09-08-04 00:49
LSA230	VELAD230	L1	LSA230	VELAD230	L2	08-05-05 00:00	08-05-05 00:01
PAN230	PANII230	L1	PAN230	PANII230	L2	17-05-05 00:00	17-05-05 01:25
M_N230	VELAD230	L1	M_N230	VELAD230	L2	01-06-06 00:00	01-06-06 00:01
M_N230	VELAD230	L1	M_N230	VELAD230	L2	09-10-06 00:00	09-10-06 00:01



5. Resumen Estadísticas de Generadores

Unidad	HON	HOL	HSR	HMP	FOH	SAL	Total	Promedios		Promedios Agrupados	
								HS	HFS	HS	HFS
BAYAN 1	3685.19	2.55	3490.88	1458.23	71.63	7.14	8514.42	1005.01	214.18	1077.3029	136.6349
BAYAN 2	3726.56	87.85	3840.26	779.55	123.49	6.00	8557.71	1275.78	150.51	1077.3029	136.6349
BAYAN 3	2778.58	0.43	3878.85	304.98	11.56	7.00	6974.40	951.12	45.22	1077.3029	136.6349
ESTRE 1	4040.53	2777.36	933.64	740.99	65.16	10.14	8557.69	764.24	79.48	880.7362	66.5953
ESTREL2	4665.75	2250.12	1204.49	405.95	31.41	8.14	8557.71	997.24	53.71	880.7362	66.5953
VALLE 1	4221.26	2279.83	784.45	1103.83	168.34	6.71	8557.71	1085.08	189.47	912.9250	135.8376
VALLE 2	4529.55	1928.32	949.81	669.62	152.41	10.00	8557.71	740.77	82.20	912.9250	135.8376
ESTI 1	4518.00	97.44	1680.67	93.37	72.53	9.00	6462.00	699.57	18.43	607.1355	15.6196
ESTI 2	4563.05	24.57	1717.51	80.51	76.37	12.25	6462.00	514.70	12.81	607.1355	15.6196
FORTU 1	7069.54	292.69	621.81	511.61	62.07	10.29	8557.71	776.23	55.77	607.9445	48.0051
FORTU 2	7057.26	264.09	608.00	563.10	65.27	15.29	8557.73	518.74	41.11	607.9445	48.0051
FORTU 3	6962.35	259.57	635.49	648.28	51.99	14.86	8557.68	528.86	47.13	607.9445	48.0051
PACOR 1	7747.50	3.44	112.76	293.01	183.30	14.50	8340.00	542.32	32.85	556.3495	32.6443
PACOR 2	7775.07	3.36	120.35	353.15	88.08	13.75	8340.00	574.46	32.09	556.3495	32.6443
PACOR 3	7750.59	2.68	116.55	362.61	107.57	14.25	8340.00	552.27	32.99	556.3495	32.6443
PANAM 1	6826.02	597.35	318.16	579.54	236.64	65.29	8557.71	118.58	12.50	121.5645	13.1680
PANAM 2	6215.12	1135.80	361.64	583.85	261.30	65.43	8557.71	117.88	12.92	121.5645	13.1680
PANAM 3	6426.11	1057.73	315.43	620.43	138.87	61.57	8558.57	126.67	12.33	121.5645	13.1680
PANAM 4	6971.50	478.24	341.94	565.08	197.52	67.29	8554.29	115.80	11.33	121.5645	13.1680
PANAM 5	6935.13	330.54	381.37	597.82	312.85	57.43	8557.71	133.16	15.86	121.5645	13.1680
PANAM 6	7059.25	191.97	390.19	637.38	278.92	65.14	8557.71	117.30	14.07	121.5645	13.1680
COPESA	322.35	0.00	7920.40	297.97	17.00	1.86	8557.71	4438.40	169.60	4438.4015	169.5985
BLM 2	0.00	3506.00	3749.96	278.84	1022.9	15.29	8557.71	474.69	85.16	408.0989	89.1312
BLM 3	296.61	4923.12	2209.12	559.13	569.73	32.14	8557.71	231.12	35.12	408.0989	89.1312
BLM 4	0.00	3954.89	2711.38	1086.83	804.62	12.86	8768.00	518.49	147.11	408.0989	89.1312
JB 5	782.29	2632.86	4303.11	254.37	585.09	7.71	8557.71	1000.52	108.82	877.1240	118.0132
JB 6	483.58	2644.38	4194.01	238.58	997.16	9.71	8557.71	753.73	127.21	877.1240	118.0132
BLM 8	1172.48	2730.52	3952.08	419.20	283.43	8.71	8557.71	901.40	80.63	743.7417	49.8202
BLM 9	4037.35	299.31	3952.19	117.41	151.45	14.14	8557.71	586.08	19.01	743.7417	49.8202
ACPTG_1	16.12	0.00	7116.89	335.09	720.70	1.80	8188.80	3962.78	586.55	2620.7623	400.6234
ACPTG_2	6.49	0.12	7235.78	599.87	346.54	3.40	8188.80	2130.11	278.36	2620.7623	400.6234
ACPTG_5	6.94	0.00	6008.98	679.13	466.55	3.40	7161.60	1769.39	336.96	2620.7623	400.6234
ACPTV_3	3395.61	168.00	4199.98	161.87	114.54	11.20	8040.00	693.18	24.68	611.0092	57.1501
ACPTV_4	6167.69	60.41	646.83	404.28	760.79	13.00	8040.00	528.84	89.62	611.0092	57.1501
ACPB_6	7419.92	3.28	116.20	257.85	602.75	15.25	8400.00	494.39	56.43	494.3867	56.4331



6. Demandas por Barra 2008 – 2009

Carga	2008						2009					
	Máxima				Mínima		Máxima				Mínima	
	Invierno		Verano		MW	Mvar	Invierno		Verano		MW	Mvar
	MW	Mvar	MW	Mvar			MW	Mvar	MW	Mvar		
10 L_S_34	11.39	2.85	11.41	2.86	4.57	1.15	12.11	3.04	12.04	3.02	4.84	1.21
124 MIR 44	13.55	3.40	13.58	3.40	5.44	1.36	14.41	3.61	14.33	3.59	5.77	1.45
131 BAL44	12.20	3.06	12.23	3.06	4.90	1.23	12.98	3.25	12.90	3.23	5.19	1.30
132 SUM44	1.35	0.34	1.35	0.34	0.54	0.14	1.44	0.36	1.43	0.36	0.57	0.14
137 GAM44	2.03	0.51	2.04	0.51	0.82	0.21	2.16	0.54	2.15	0.54	0.87	0.22
138 ACL44	2.03	0.51	2.04	0.51	0.82	0.21	2.16	0.54	2.15	0.54	0.87	0.22
13 MDNA34	51.84	12.99	51.93	13.02	20.80	5.21	55.13	13.82	54.81	13.74	22.05	5.53
154 CEMPAN15	4.06	1.02	4.07	1.02	1.63	0.41	4.32	1.08	4.29	1.08	1.73	0.43
160 GEEHAN13_8	15.38	3.85	15.41	3.86	6.17	1.55	16.35	4.10	16.26	4.08	6.54	1.64
16 PRO34	8.26	2.07	8.27	2.07	3.31	0.83	8.78	2.20	8.73	2.19	3.51	0.88
192 CHANG34	11.28	2.83	11.30	2.83	4.53	1.14	12.00	3.01	11.93	2.99	4.80	1.20
19 C_V115	70.36	17.63	70.49	17.67	28.23	7.08	74.83	18.75	74.40	18.65	29.93	7.50
20 CH_AZUL	7.12	1.78	7.13	1.79	2.86	0.72	7.57	1.90	7.53	1.89	3.03	0.76
21 C_BAN115	67.27	16.86	67.39	16.89	26.99	6.77	71.54	17.93	71.14	17.83	28.62	7.17
23 CH115	29.38	7.36	29.43	7.38	11.79	2.95	31.24	7.83	31.07	7.79	12.50	3.13
26 LOC115	85.31	21.38	85.47	21.42	34.23	8.58	90.73	22.74	90.21	22.61	36.29	9.10
26 LOC115	0.66	0.17	0.66	0.17	0.27	0.07	0.70	0.18	0.70	0.18	0.28	0.07
30 MAR115	101.78	25.51	101.96	25.55	40.84	10.24	108.24	27.13	107.63	26.97	43.30	10.85
33 STM115	61.26	15.35	61.37	15.38	24.58	6.16	65.15	16.33	64.78	16.24	26.06	6.53
37 SAN115	74.77	18.74	74.90	18.77	30.00	7.52	79.52	19.93	79.07	19.82	31.81	7.97
48 TINAJ115	36.57	9.17	36.64	9.18	14.68	3.68	38.89	9.75	38.67	9.69	15.56	3.90
50 M_O115	57.65	14.45	57.75	14.47	23.13	5.80	61.31	15.37	60.96	15.28	24.52	6.15
50 M_O115	0.69	0.17	0.69	0.17	0.28	0.07	0.74	0.18	0.73	0.18	0.29	0.07
512 LGUIAS 34_5							14.67	3.68	14.58	3.66	5.87	1.47
52 TOC115	35.55	8.91	35.62	8.93	14.27	3.58	37.81	9.48	37.60	9.42	15.12	3.79
52 TOC115	0.98	0.25	0.98	0.25	0.39	0.10	1.05	0.26	1.04	0.26	0.42	0.11
52 TOC115	1.64	0.41	1.65	0.41	0.66	0.17	1.75	0.44	1.74	0.44	0.70	0.18
52 TOC115	0.52	0.13	0.52	0.13	0.21	0.05	0.55	0.14	0.55	0.14	0.22	0.06
52 TOC115	0.60	0.15	0.60	0.15	0.24	0.06	0.64	0.16	0.64	0.16	0.26	0.06
57 L_M_13	13.37	3.35	13.39	3.36	5.37	1.35	14.22	3.56	14.14	3.54	5.69	1.43
61 FFIELD	79.79	20.00	79.93	20.03	32.02	8.02	84.85	21.27	84.37	21.15	33.94	8.51
7 CHO34	57.11	14.31	57.21	14.34	22.92	5.74	60.74	15.22	60.39	15.14	24.30	6.09
87 CAL115	6.10	1.53	6.11	1.53	2.45	0.61	6.49	1.63	6.45	1.62	2.60	0.65
9 LSA115	93.65	23.47	93.81	23.51	37.58	9.42	99.59	24.96	99.02	24.82	39.84	9.98



7. Demandas por Barra 2010 - 2011

Carga	2010						2011					
	Máxima				Mínima		Máxima				Mínima	
	Invierno		Verano		MW	Mvar	Invierno		Verano		MW	Mvar
	MW	Mvar	MW	Mvar			MW	Mvar	MW	Mvar		
10 L_S_34	12.75	3.19	12.75	3.19	5.04	1.26	12.85	3.06	12.85	3.06	4.97	3.06
124 MIR44	15.17	3.80	15.17	3.80	6.00	1.50	15.29	3.65	15.29	3.65	5.92	3.65
131 BAL44	13.66	3.42	13.66	3.42	5.40	1.35	13.76	3.28	13.76	3.28	5.33	3.28
132 SUM44	1.51	0.38	1.51	0.38	0.60	0.15	1.53	0.36	1.53	0.36	0.59	0.36
137 GAM44	2.28	0.57	2.28	0.57	0.90	0.23	2.29	0.55	2.29	0.55	0.89	0.55
138 ACL44	2.28	0.57	2.28	0.57	0.90	0.23	2.29	0.55	2.29	0.55	0.89	0.55
13 MDNA34	58.02	14.54	58.02	14.54	22.95	5.75	57.88	13.94	57.88	13.94	22.41	13.94
154 CEMPAN15	4.54	1.14	4.54	1.14	1.80	0.45	5.41	1.09	5.41	1.09	2.09	1.09
160 GEEHAN13_8	17.21	4.31	17.21	4.31	6.81	1.71	50.58	4.14	50.58	4.14	19.58	4.14
16 PRO34	9.25	2.32	9.25	2.32	3.66	0.92	9.22	2.22	9.22	2.22	3.57	2.22
192 CHANG34	12.63	3.17	12.63	3.17	5.00	1.25	12.77	3.03	12.77	3.03	4.94	3.03
19 C_V115	78.76	19.74	78.76	19.74	31.15	7.81	81.45	18.92	81.45	18.92	31.53	18.92
20 CH_AZUL	7.97	2.00	7.97	2.00	3.15	0.79	7.95	1.92	7.95	1.92	3.08	1.92
21 C_BAN115	75.30	18.87	75.30	18.87	29.79	7.47	75.86	18.09	75.86	18.09	29.37	18.09
23 CH115	32.88	8.24	32.88	8.24	13.01	3.26	31.15	7.90	31.15	7.90	12.06	7.90
26 LOC115	95.50	23.93	95.50	23.93	37.78	9.47	96.20	22.95	96.20	22.95	37.24	22.95
26 LOC115	0.74	0.19	0.74	0.19	0.29	0.07	0.75	0.18	0.75	0.18	0.29	0.18
30 MAR115	113.93	28.55	113.93	28.55	45.07	11.29	114.79	27.37	114.79	27.37	44.44	27.37
33 STM115	68.58	17.19	68.58	17.19	27.13	6.80	65.63	16.48	65.63	16.48	25.41	16.48
37 SAN115	83.69	20.98	83.69	20.98	33.11	8.30	84.32	20.11	84.32	20.11	32.65	20.11
48 TINAJ115	40.94	10.26	40.94	10.26	16.19	4.06	50.58	9.84	50.58	9.84	19.58	9.84
50 M_O115	64.53	16.17	64.53	16.17	25.53	6.40	66.78	15.50	66.78	15.50	25.85	15.50
50 M_O115	0.77	0.19	0.77	0.19	0.31	0.08	0.80	0.19	0.80	0.19	0.31	0.19
512 LGUIAS 34_5	15.44	3.87	15.44	3.87	6.11	1.53	15.55	3.71	15.55	3.71	6.02	3.71
52 TOC115	39.80	9.97	39.80	9.97	15.74	3.95	41.13	9.56	41.13	9.56	15.92	9.56
52 TOC115	1.10	0.28	1.10	0.28	0.44	0.11	1.14	0.26	1.14	0.26	0.44	0.26
52 TOC115	1.84	0.46	1.84	0.46	0.73	0.18	1.90	0.44	1.90	0.44	0.74	0.44
52 TOC115	0.58	0.15	0.58	0.15	0.23	0.06	0.60	0.14	0.60	0.14	0.23	0.14
52 TOC115	0.68	0.17	0.68	0.17	0.27	0.07	0.70	0.16	0.70	0.16	0.27	0.16
57 L_M_13	14.97	3.75	14.97	3.75	5.92	1.48	16.29	3.60	16.29	3.60	6.31	3.60
61 FFIELD	89.31	22.38	89.31	22.38	35.33	8.85	92.03	21.46	92.03	21.46	35.63	21.46
7 CHO34	63.93	16.02	63.93	16.02	25.29	6.34	64.41	15.36	64.41	15.36	24.94	15.36
87 CAL115	6.83	1.71	6.83	1.71	2.70	0.68	6.82	1.64	6.82	1.64	2.64	1.64
9 LSA115	104.82	26.27	104.82	26.27	41.46	10.39	105.61	25.19	105.61	25.19	40.88	25.19



8. Despachos de Generación (MW)

UNIDAD	2008			2009			2010			2011		
	Máxima		Mínima	Máxima		Mínima	Máxima		Mínima	Máxima		Mínima
	Invierno	Verano		Invierno	Verano		Invierno	Verano		Invierno	Verano	
101 BAY13A	48.7	65.7		51.7	49.4		69.6	66.8		41.9	48.1	
102 BAY13B	46.0	65.7		51.7	49.4		69.6	66.8		41.9	48.1	
104 COPESA13												
106 PANAM13A	13.5	15.2	15.0	13.5	15.1	14.1	13.5	14.7	14.1	14.0	15.0	14.0
106 PANAM13A	13.5	15.2	15.0	13.5	15.1	14.1	13.5	14.7	14.1	14.0	15.0	14.0
106 PANAM13A	13.5	15.2	15.0	13.5	15.1	14.1	13.5	14.7	14.1	14.0	15.0	14.0
107 PANAM13B	13.5	15.2	15.0	13.5	15.1		13.5	14.7		14.0	15.0	
107 PANAM13B	13.5	15.2	15.0	13.5	15.1		13.5	14.7		14.0	15.0	
107 PANAM13B	13.5	15.2	15.0	13.5	15.1		13.5	14.7		14.0	15.0	
108 BAY13C		64.4		49.9	47.7		68.7	64.8		40.2	47.4	
116 PACORA13	14.0	17.0	16.1	14.0	16.1	16.1	14.0	16.7	15.4	15.0	15.0	15.0
116 PACORA13	14.0	17.0	16.1	14.0	16.1	16.1	14.0	16.7	15.4	15.0	15.0	15.0
116 PACORA13	14.0	17.0	16.1	14.0	16.1	16.1	14.0	16.7	15.4	15.0	15.0	
126 MIR13A	8.6	8.6		8.6	8.6		8.6	8.6		8.5	8.5	
127 MIR13B	8.6	8.6		8.6	8.6		8.6	8.6		8.5	8.5	
130 MIR13F	10.7	9.7		9.7	9.7		10.7	10.7		10.6	10.6	
134 MAD6A	9.7	9.7		9.7	9.7		9.7	9.7		9.6	9.6	
135 MAD6B	9.7	9.7	10.0	9.7	9.7	10.0	9.7	9.7	10.0	9.6	9.6	10.0
136 MAD6C	9.7	9.7	10.0	9.7	9.7	10.0	9.7	9.7	10.0	9.6	9.6	10.0
140 GAT6A	1.9	1.9	2.0	1.9	1.9	2.0	1.9	1.9	2.0	1.9	1.9	2.0
140 GAT6A	1.9	1.9	2.0	1.9	1.9	2.0	1.9	1.9	2.0	1.9	1.9	2.0
140 GAT6A	1.9	1.9	2.0	1.9	1.9	2.0	1.9	1.9	2.0	1.9	1.9	2.0
141 GAT6B	3.9	3.9	4.0	3.9	3.9	4.0	3.9	3.9	4.0	3.8	3.8	4.0
141 GAT6B	3.9	3.9	4.0	3.9	3.9	4.0	3.9	3.9	4.0	3.8	3.8	4.0
141 GAT6B	3.9	3.9	4.0	3.9	3.9	4.0	3.9	3.9	4.0	3.8	3.8	4.0
142 CANJ13A	40.0	40.0	35.0	40.0	40.0	50.0	46.0	35.0	50.0	40.0	40.0	45.0
143 CANJ13B	40.0	40.0		40.0	40.0		46.0	35.0		40.0		
301 CONC13_8								9.2				
302 PASOANCH13_8								4.4				
303 SIND13_8										9.0	9.0	
307 CHANG75A										65.0	65.0	60.0



UNIDAD	2008			2009			2010			2011		
	Máxima		Mínima	Máxima		Mínima	Máxima		Mínima	Máxima		Mínima
	Invierno	Verano		Invierno	Verano		Invierno	Verano		Invierno	Verano	
521 TCARIBE 13_8				15.8	15.5	10.0	15.8	15.8	10.0	15.6	15.6	10.0
521 TCARIBE 13_8				15.8	15.5	10.0	15.8	15.8	10.0	15.6	15.6	10.0
521 TCARIBE 13_8				15.8	15.5		15.8	15.8		15.6	15.6	
523 TBALBOA 13A	8.2			8.2	8.2	10.0	8.2	8.2	9.0	8.1	8.1	4.6
523 TBALBOA 13A	8.2			8.2	8.2	10.0	8.2	8.2	9.0	8.1	8.1	4.6
523 TBALBOA 13A	8.2			8.2	8.2		8.2	8.2		8.1	8.1	4.6
523 TBALBOA 13A	8.2			8.2	8.2		8.2	8.2		8.1	8.1	4.6
523 TBALBOA 13A	8.2			8.2	8.2		8.2	8.2		8.1	8.1	
524 TBALBOA 13B	8.2			8.2	8.2		8.2	8.2		8.1	8.1	
524 TBALBOA 13B	8.2			8.2	8.2		8.2	8.2		8.1	8.1	4.6
524 TBALBOA 13B	8.2			8.2	8.2		8.2	8.2		8.1	8.1	4.6
524 TBALBOA 13B	8.2			8.2	8.2		8.2	8.2		8.1	8.1	4.6
524 TBALBOA 13B	8.2			8.2	8.2		8.2	8.2		8.1	8.1	4.6
525 TATLANTIC13A	36.0			36.0			36.0	36.0		36.0	36.0	18.0
525 TATLANTIC13A				36.0			36.0	36.0		36.0	36.0	
526 TATLANTIC13B				18.3			18.3	18.3		18.3	18.3	19.2
526 TATLANTIC13B				18.3			18.3	18.3		18.3	18.3	
66 BLM13B	33.0	33.0		33.0	33.0	24.0	37.0	30.0	32.0	38.0	38.0	24.0
67 BLM13C	33.0	35.0		33.0	33.0	24.0	37.0	30.0	32.0	38.0	38.0	24.0
68 BLM13D	33.0	35.0		33.0	33.0	24.0	37.0	30.0	32.0	38.0	38.0	24.0
70 TGJB13A	31.0	33.0			31.0		30.0	30.0		31.0	31.0	
71 TGJB13B	31.0	31.0			31.0		30.0	30.0		31.0	31.0	
72 BLMCCA	31.0	31.0			31.0			30.0		31.0	31.0	
73 BLMCCB	47.0	57.0			47.0		20.0	37.0		47.0	47.0	
90 EST-13L	20.0	17.0	15.0	20.0	17.0	15.0	22.0	20.0	15.0	22.0	15.0	15.0
91 EST-13T	20.0			20.0			22.0			22.0		
94 LV-13_8L	22.0	19.0	17.0	22.0	19.0	17.0	23.4	23.4	17.0	23.4	17.0	17.0
95 LV-13_8T	22.0			22.0			23.4	23.4		23.4		
97 FOR13A	80.0	90.0	52.2	90.0	90.0	66.3	80.0	80.0	64.4	84.0	80.0	60.7
98 FOR13B	80.0	90.0	59.3	90.0	90.0	55.1	80.0	80.0	55.1	84.0	80.0	
99 FOR13C	80.0	90.0	59.3	90.0	90.0					80.0		



9. Indicadores promedio de confiabilidad del sistema

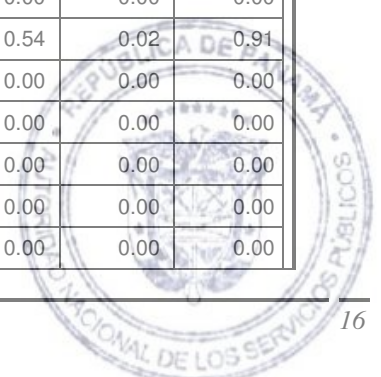
Indicador	2008			2009			2010			2011		
	Máxima		Mínima	Máxima		Mínima	Máxima		Mínima	Máxima		Mínima
	Invierno	Verano	Inv y Ver	Invierno	Verano	Inv y Ver	Invierno	Verano	Inv y Ver	Invierno	Verano	Inv y Ver
SAIFI	0.6178	1.1930	0.1047	2.0625	1.0772	0.0695	0.3117	0.1557	0.0692	0.4124	0.1546	0.0604
CAIFI	0.8752	1.1930	0.1548	2.0625	1.0772	0.1125	0.4608	0.2302	0.1120	0.6373	0.2389	0.0978
SAIDI	0.1955	0.3151	0.0728	0.6302	0.3007	0.0725	0.1145	0.0573	0.0725	0.1698	0.0588	0.0725
CAIDI	0.1381	0.0566	0.2440	0.1333	0.0598	0.3640	0.1603	0.0789	0.3658	0.1790	0.0815	0.4204
ASAI	99.9949%	99.9832%	99.9976%	99.9835%	99.9840%	99.9976%	99.9970%	99.9970%	99.9976%	99.9956%	99.9969%	99.9976%
ASUI	0.0051%	0.0168%	0.0024%	0.0165%	0.0160%	0.0024%	0.0030%	0.0030%	0.0024%	0.0044%	0.0031%	0.0024%
EENS	67.49	151.19	6.18	346.07	162.97	6.50	85.78	43.33	6.77	88.42	45.28	6.79
DEM	2832.97	1395.34	2276.79	3010.83	1482.95	2419.73	3169.87	1561.28	2547.55	3665.56	1805.43	2945.92
VERE	0.0024%	0.0108%	0.0003%	0.0115%	0.0110%	0.0003%	0.0027%	0.0028%	0.0003%	0.0024%	0.0025%	0.0002%

- SAIFI: Frecuencia de interrupción promedio del sistema, Salidas/Año
 CAIFI: Frecuencia de interrupción promedio por usuario, Salidas/C-Año
 SAIDI: Duración de interrupción promedio del sistema, Horas/Año
 CAIDI: Duración de interrupción promedio por usuario, Horas/C-Año
 ASAI: Disponibilidad de servicio promedio, %
 ASUI: Indisponibilidad de servicio promedio, %
 ENS: Energía no suministrada, MWh/Año
 DEM: Demanda anual de energía del sistema, MWh
 VERE: Valor Esperado de Racionamiento de Energía, %



10. Indicadores promedio de confiabilidad por Cargas

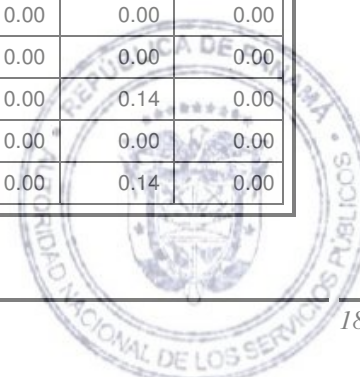
Carga	Barra	2008											
		Máxima								Mínima			
		Invierno				Verano				Invierno y Verano			
		TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a	TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a	TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a
lod_10_1	10 L_S_34	2.12	3.54	0.14	12.64	1.28	2.60	0.06	7.68	0.00	0.00	0.14	0.00
lod_124_1	124 MIR44	0.00	0.00	0.00	0.00	0.22	0.90	0.03	1.56	0.00	0.00	0.00	0.00
lod_131_1	131 BAL44	0.00	0.00	0.00	0.00	0.22	0.90	0.03	1.40	0.00	0.00	0.00	0.00
lod_132_1	132 SUM44	0.00	0.00	0.00	0.00	0.22	0.90	0.03	0.15	0.00	0.00	0.00	0.00
lod_137_1	137 GAM44	0.00	0.00	0.00	0.00	0.22	0.90	0.03	0.23	0.00	0.00	0.00	0.00
lod_138_1	138 ACL44	0.00	0.00	0.00	0.00	0.22	0.90	0.03	0.23	0.00	0.00	0.00	0.00
lod_13_1	13 MDNA34	0.00	0.00	0.00	0.00	0.22	0.90	0.03	5.96	0.00	0.00	0.00	0.00
lod_154_1	154 CEMPAN15	0.01	1.84	0.00	0.03	0.22	1.78	0.02	0.48	0.01	0.58	0.00	0.01
lod_160_1	160 GEEHAN13	0.00	0.00	0.00	0.00	0.22	0.90	0.03	1.77	0.00	0.00	0.00	0.00
lod_16_1	16 PRO34	0.33	1.96	0.04	1.41	0.38	1.84	0.02	1.66	0.00	0.00	0.02	0.00
lod_192_1	192 CHANG34	1.69	3.95	0.10	9.97	1.06	2.79	0.04	6.32	1.08	0.55	0.41	2.94
lod_19_1	19 C_V115	0.00	0.00	0.00	0.00	0.22	0.90	0.03	8.09	0.00	0.00	0.00	0.00
lod_20_1	20 CH_AZUL	1.62	4.63	0.08	6.04	1.03	3.13	0.04	3.86	1.32	1.28	0.22	2.26
lod_21_1	21 C_BAN115	0.00	0.00	0.00	0.00	0.22	0.90	0.03	7.73	0.00	0.00	0.00	0.00
lod_23_1	23 CH115	0.01	1.84	0.00	0.12	0.22	1.78	0.02	3.44	0.01	0.58	0.00	0.06
lod_26_1	26 LOC115	0.00	0.00	0.00	0.00	0.22	0.90	0.03	9.81	0.00	0.00	0.00	0.00
lod_26_ME	26 LOC115	0.00	0.00	0.00	0.00	0.22	0.90	0.03	0.08	0.00	0.00	0.00	0.00
lod_30_1	30 MAR115	0.00	0.01	0.00	0.00	0.22	0.90	0.03	11.70	0.00	0.00	0.00	0.00
lod_33_1	33 STM115	0.06	1.78	0.01	1.94	0.25	1.75	0.02	8.02	0.06	0.54	0.02	0.91
lod_37_1	37 SAN115	0.00	0.00	0.00	0.00	0.22	0.90	0.03	8.60	0.00	0.00	0.00	0.00
lod_48_1	48 TINAJ115	0.00	0.00	0.00	0.00	0.22	0.90	0.03	4.20	0.00	0.00	0.00	0.00
lod_50_1	50 M_O115	0.00	0.00	0.00	0.00	0.22	0.90	0.03	6.63	0.00	0.00	0.00	0.00
lod_50_RI	50 M_O115	0.00	0.00	0.00	0.00	0.22	0.90	0.03	0.08	0.00	0.00	0.00	0.00
lod_512_1	512 LGUIAS 3	0.00	0.00	0.00	0.00	0.22	0.90	0.03	1.59	0.00	0.00	0.00	0.00



Carga	Barra	2008											
		Máxima								Mínima			
		Invierno				Verano				Invierno y Verano			
		TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a	TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a	TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a
lod_52_1	52 TOC115	0.00	0.00	0.00	0.00	0.22	0.90	0.03	4.09	0.00	0.00	0.00	0.00
lod_52_CO	52 TOC115	0.00	0.00	0.00	0.00	0.22	0.90	0.03	0.11	0.00	0.00	0.00	0.00
lod_52_EM	52 TOC115	0.00	0.00	0.00	0.00	0.22	0.90	0.03	0.19	0.00	0.00	0.00	0.00
lod_52_MA	52 TOC115	0.00	0.00	0.00	0.00	0.22	0.90	0.03	0.06	0.00	0.00	0.00	0.00
lod_52_SA	52 TOC115	0.00	0.00	0.00	0.00	0.22	0.90	0.03	0.07	0.00	0.00	0.00	0.00
lod_57_1	57 L_M_13	0.00	0.00	0.00	0.00	0.22	0.90	0.03	1.54	0.00	0.01	0.00	0.00
lod_61_1	61 FFIELD	0.00	0.00	0.00	0.00	0.22	0.90	0.03	9.18	0.00	0.01	0.00	0.00
lod_7_1	7 CHO34	0.27	0.45	0.14	8.03	0.33	1.09	0.06	10.09	0.00	0.00	0.14	0.00
lod_87_1	87 CAL115	0.00	0.00	0.00	0.00	0.22	0.90	0.03	0.70	0.00	0.00	0.00	0.00
lod_9_1	9 LSA115	0.56	0.94	0.14	27.31	0.48	1.33	0.06	23.89	0.00	0.00	0.14	0.00

Carga	Barra	2009											
		Máxima								Mínima			
		Invierno				Verano				Invierno y Verano			
		TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a	TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a	TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a
lod_10_1	10 L_S_34	2.68	4.88	0.13	17.19	1.28	2.55	0.06	8.10	0.00	0.00	0.14	0.00
lod_124_1	124 MIR44	0.46	1.70	0.06	3.49	0.22	0.89	0.03	1.65	0.00	0.00	0.00	0.00
lod_131_1	131 BAL44	0.46	1.70	0.06	3.14	0.22	0.89	0.03	1.48	0.00	0.00	0.00	0.00
lod_132_1	132 SUM44	0.46	1.70	0.06	0.35	0.22	0.89	0.03	0.16	0.00	0.00	0.00	0.00
lod_137_1	137 GAM44	0.46	1.70	0.06	0.52	0.22	0.89	0.03	0.25	0.00	0.00	0.00	0.00
lod_138_1	138 ACL44	0.46	1.70	0.06	0.52	0.22	0.89	0.03	0.25	0.00	0.00	0.00	0.00
lod_13_1	13 MDNA34	0.46	1.70	0.06	13.35	0.22	0.89	0.03	6.29	0.00	0.00	0.00	0.00
lod_154_1	154 CEMPAN15	0.46	1.70	0.06	1.05	0.22	0.89	0.03	0.49	0.00	0.00	0.00	0.00
lod_160_1	160 GEEHAN13	0.46	1.70	0.06	3.96	0.22	0.89	0.03	1.87	0.00	0.00	0.00	0.00

Carga	Barra	2009											
		Máxima								Mínima			
		Invierno				Verano				Invierno y Verano			
		TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a	TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a	TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a
lod_16_1	16 PRO34	0.46	1.70	0.06	2.13	0.22	0.89	0.03	1.00	0.00	0.00	0.02	0.00
lod_192_1	192 CHANG34	1.57	3.31	0.11	9.97	0.75	1.73	0.05	4.70	1.07	0.40	0.56	3.09
lod_19_1	19 C_V115	0.46	1.70	0.06	18.12	0.22	0.89	0.03	8.54	0.00	0.00	0.00	0.00
lod_20_1	20 CH_AZUL	1.81	4.20	0.10	7.28	0.87	2.17	0.05	3.43	1.31	1.13	0.25	2.39
lod_21_1	21 C_BAN115	0.46	1.70	0.06	17.32	0.22	0.89	0.03	8.16	0.00	0.00	0.00	0.00
lod_23_1	23 CH115	0.47	3.36	0.03	7.70	0.22	1.76	0.02	3.63	0.01	0.42	0.00	0.06
lod_26_1	26 LOC115	0.46	1.70	0.06	21.98	0.22	0.89	0.03	10.35	0.00	0.00	0.00	0.00
lod_26_ME	26 LOC115	0.46	1.70	0.06	0.17	0.22	0.89	0.03	0.08	0.00	0.00	0.00	0.00
lod_30_1	30 MAR115	0.46	1.70	0.06	26.22	0.22	0.89	0.03	12.35	0.00	0.00	0.00	0.00
lod_33_1	33 STM115	0.52	3.30	0.03	17.97	0.25	1.72	0.02	8.47	0.06	0.39	0.03	0.96
lod_37_1	37 SAN115	0.46	1.70	0.06	19.26	0.22	0.89	0.03	9.08	0.00	0.00	0.00	0.00
lod_48_1	48 TINAJ115	0.46	1.70	0.06	9.42	0.22	0.89	0.03	4.44	0.00	0.00	0.00	0.00
lod_50_1	50 M_O115	0.46	1.70	0.06	14.85	0.22	0.89	0.03	7.00	0.00	0.00	0.00	0.00
lod_50_RI	50 M_O115	0.46	1.70	0.06	0.18	0.22	0.89	0.03	0.08	0.00	0.00	0.00	0.00
lod_512_1	512 LGUIAS 3	0.46	1.70	0.06	3.55	0.22	0.89	0.03	1.67	0.00	0.00	0.00	0.00
lod_52_1	52 TOC115	0.46	1.70	0.06	9.16	0.22	0.89	0.03	4.32	0.00	0.00	0.00	0.00
lod_52_CO	52 TOC115	0.46	1.70	0.06	0.25	0.22	0.89	0.03	0.12	0.00	0.00	0.00	0.00
lod_52_EM	52 TOC115	0.46	1.70	0.06	0.42	0.22	0.89	0.03	0.20	0.00	0.00	0.00	0.00
lod_52_MA	52 TOC115	0.46	1.70	0.06	0.14	0.22	0.89	0.03	0.06	0.00	0.00	0.00	0.00
lod_52_SA	52 TOC115	0.46	1.70	0.06	0.16	0.22	0.89	0.03	0.07	0.00	0.00	0.00	0.00
lod_57_1	57 L_M_13	0.46	1.70	0.06	3.44	0.22	0.89	0.03	1.62	0.00	0.00	0.00	0.00
lod_61_1	61 FFIELD	0.51	1.96	0.06	23.16	0.24	1.02	0.02	10.89	0.00	0.00	0.00	0.00
lod_7_1	7 CHO34	0.85	2.27	0.13	27.49	0.41	1.19	0.06	13.02	0.00	0.00	0.14	0.00
lod_87_1	87 CAL115	0.46	1.70	0.06	1.57	0.22	0.89	0.03	0.74	0.00	0.00	0.00	0.00
lod_9_1	9 LSA115	1.15	2.70	0.13	60.59	0.54	1.40	0.06	28.41	0.00	0.00	0.14	0.00

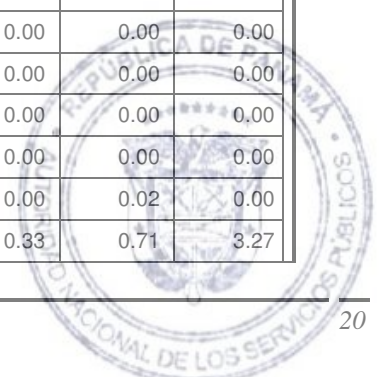


Carga	Barra	2010											
		Máxima								Mínima			
		Invierno				Verano				Invierno y Verano			
		TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a	TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a	TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a
lod_10_1	10 L_S_34	0.00	0.09	0.00	0.01	0.00	0.05	0.00	0.01	0.00	0.00	0.14	0.00
lod_124_1	124 MIR44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_131_1	131 BAL44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_132_1	132 SUM44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_137_1	137 GAM44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_138_1	138 ACL44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_13_1	13 MDNA34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_154_1	154 CEMPAN15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_160_1	160 GEEHAN13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_16_1	16 PRO34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
lod_192_1	192 CHANG34	1.06	1.71	0.14	7.04	0.52	0.84	0.07	3.47	1.07	0.40	0.57	3.22
lod_19_1	19 C_V115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_20_1	20 CH_AZUL	1.30	2.61	0.11	5.43	0.64	1.28	0.06	2.68	1.31	1.12	0.25	2.49
lod_21_1	21 C_BAN115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_23_1	23 CH115	0.01	1.77	0.00	0.13	0.00	0.89	0.00	0.06	0.01	0.42	0.00	0.06
lod_26_1	26 LOC115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_26_ME	26 LOC115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_30_1	30 MAR115	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_33_1	33 STM115	0.06	1.70	0.01	2.18	0.03	0.84	0.00	1.07	0.06	0.39	0.03	1.00
lod_37_1	37 SAN115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_48_1	48 TINAJ115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_50_1	50 M_O115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_50_RI	50 M_O115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_512_1	512 LGUIAS 3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_52_1	52 TOC115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_52_CO	52 TOC115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



Carga	Barra	2010											
		Máxima								Mínima			
		Invierno				Verano				Invierno y Verano			
		TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a	TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a	TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a
lod_52_EM	52 TOC115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
lod_52_MA	52 TOC115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
lod_52_SA	52 TOC115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
lod_57_1	57 L_M_13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
lod_61_1	61 FFIELD	0.09	0.45	0.05	4.25	0.05	0.24	0.02	2.26	0.00	0.00	0.00	0.00
lod_7_1	7 CHO34	0.42	0.68	0.14	14.24	0.22	0.36	0.07	7.48	0.00	0.00	0.14	0.00
lod_87_1	87 CAL115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
lod_9_1	9 LSA115	0.95	1.52	0.14	52.49	0.48	0.76	0.07	26.30	0.00	0.00	0.14	0.00

Carga	Barra	2011											
		Máxima								Mínima			
		Invierno				Verano				Invierno y Verano			
		TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a	TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a	TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a
lod_10_1	10 L_S_34	2.09	3.34	0.14	14.10	0.00	0.02	0.00	0.00	0.00	0.00	0.18	0.00
lod_124_1	124 MIR44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_131_1	131 BAL44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_132_1	132 SUM44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_137_1	137 GAM44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_138_1	138 ACL44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_13_1	13 MDNA34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_154_1	154 CEMPAN15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_160_1	160 GEEHAN13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_16_1	16 PRO34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	
lod_192_1	192 CHANG34	1.05	1.73	0.14	7.01	0.53	0.81	0.08	3.58	1.08	0.33	0.71	3.27



Carga	Barra	2011											
		Máxima								Mínima			
		Invierno				Verano				Invierno y Verano			
		TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a	TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a	TCIT h/a	TCIF Sal/a	AID h/a	LPENS MWh/a
lod_19_1	19 C_V115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
lod_20_1	20 CH_AZUL	1.28	2.63	0.11	5.33	0.65	1.26	0.06	2.73	1.32	1.05	0.27	2.49
lod_21_1	21 C_BAN115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
lod_23_1	23 CH115	0.01	1.79	0.00	0.12	0.00	0.84	0.00	0.06	0.01	0.35	0.00	0.06
lod_26_1	26 LOC115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_26_ME	26 LOC115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_30_1	30 MAR115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_33_1	33 STM115	0.06	1.72	0.01	2.06	0.03	0.81	0.00	1.05	0.06	0.32	0.04	0.96
lod_37_1	37 SAN115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_48_1	48 TINAJ115	0.02	0.26	0.02	0.53	0.01	0.14	0.01	0.32	0.00	0.00	0.00	0.00
lod_50_1	50 M_O115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_50_RI	50 M_O115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_512_1	512 LGUIAS 3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_52_1	52 TOC115	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_52_CO	52 TOC115	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_52_EM	52 TOC115	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_52_MA	52 TOC115	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_52_SA	52 TOC115	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_57_1	57 L_M_13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_61_1	61 FFIELD	0.10	0.54	0.04	5.10	0.06	0.27	0.02	2.72	0.00	0.00	0.00	0.00
lod_7_1	7 CHO34	0.44	0.72	0.14	14.75	0.23	0.35	0.08	7.70	0.00	0.00	0.18	0.00
lod_87_1	87 CAL115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lod_9_1	9 LSA115	0.71	1.19	0.14	39.40	0.49	0.74	0.08	27.12	0.00	0.00	0.18	0.00

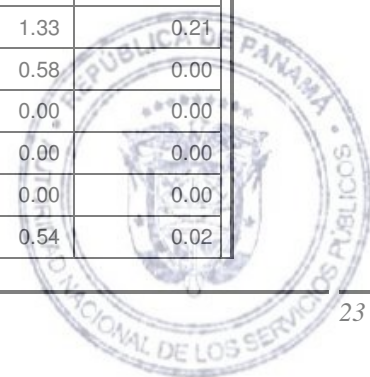




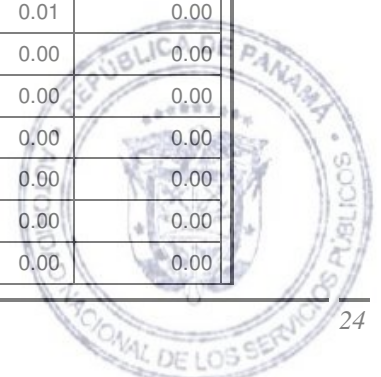
de

11. Indicadores promedio de confiabilidad por Barras

BARRA	2008								
	MÁXIMA						MÍNIMA		
	INVIERNO			VERANO			INVIERNO Y VERANO		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
10 L_S_34	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.14
100 BAY230	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.63	0.15
101 BAY13A	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.63	0.15
102 BAY13B	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.63	0.15
103 COPESA23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
104 COPESA13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
108 BAY13C	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.63	0.15
109 STA RITA115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110 PTMD115A	0.00	0.02	0.00	0.00	0.01	0.00	0.00	0.01	0.00
111 PTMD115B	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00
14 PRO230	0.17	1.98	0.04	0.09	0.95	0.02	0.00	0.00	0.00
15 PRO115	0.17	1.98	0.04	0.09	0.95	0.02	0.00	0.00	0.02
154 CEMPAN15	0.00	1.85	0.00	0.00	0.89	0.00	0.01	0.58	0.00
16 PRO34	0.17	1.98	0.04	0.09	0.95	0.02	0.00	0.00	0.02
17 CEMEX	0.00	1.85	0.00	0.00	0.89	0.00	0.00	0.58	0.00
190 CHANG230	0.33	2.21	0.07	0.17	1.07	0.03	0.00	0.00	0.00
191 CHANG115	0.88	3.99	0.10	0.44	1.92	0.05	0.65	0.56	0.41
192 CHANG34	0.88	3.99	0.10	0.44	1.92	0.05	0.65	0.56	0.41
20 CH_AZUL	0.85	4.72	0.08	0.43	2.28	0.04	0.79	1.33	0.21
23 CH115	0.00	1.85	0.00	0.00	0.89	0.00	0.00	0.58	0.00
30 MAR115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
317 MENDRE13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
321 CALDERA34_5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33 STM115	0.03	1.78	0.01	0.02	0.85	0.00	0.04	0.54	0.02



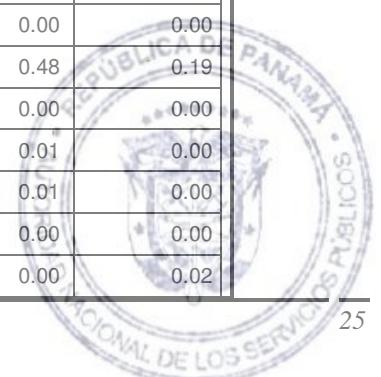
BARRA	2008								
	MÁXIMA						MÍNIMA		
	INVIERNO			VERANO			INVIERNO Y VERANO		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
37 SAN115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
48 TINAJ115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50 M_O115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
511 LGUIAS230	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
512 LGUIAS 34_5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
515 PANPOWER230	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
516 PANAPOW13A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
52 TOC115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
522 TBALBOA 115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
523 TBALBOA 13A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
524 TBALBOA 13B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
525 TATLANTIC13A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
526 TATLANTIC13B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54 LM1115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55 LM2115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
56 L_M_44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
57 L_M_13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
58 MHOPE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6 CHO115	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.14
6000 FRONTER	0.20	3.75	0.02	0.10	1.80	0.01	0.00	0.00	0.00
61 FFIELD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
63 RCITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
64 COLON44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
66 BLM13B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67 BLM13C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68 BLM13D	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69 TGJB13_8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



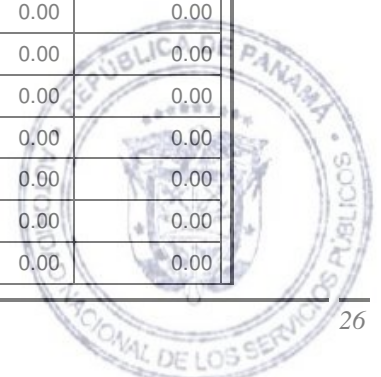
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BARRA	2008								
	MÁXIMA						MÍNIMA		
	INVIERNO			VERANO			INVIERNO Y VERANO		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
7 CHO34	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.14
70 TGJB13A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
71 TGJB13B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
72 BLMCCA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73 BLMCCB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86 CC13_8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87 CAL115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9 LSA115	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.14

BARRA	2009								
	MÁXIMA						MÍNIMA		
	INVIERNO			VERANO			INVIERNO Y VERANO		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
10 L_S_34	0.00	0.00	0.04	0.00	0.00	0.02	0.00	0.00	0.14
100 BAY230	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.48	0.19
101 BAY13A	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.48	0.19
102 BAY13B	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.48	0.19
103 COPESA23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
104 COPESA13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
108 BAY13C	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.48	0.19
109 STA RITA115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110 PTMD115A	0.00	0.02	0.00	0.00	0.01	0.00	0.00	0.01	0.00
111 PTMD115B	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00
14 PRO230	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 PRO115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02



BARRA	2009								
	MÁXIMA						MÍNIMA		
	INVIERNO			VERANO			INVIERNO Y VERANO		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
154 CEMPAN15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16 PRO34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
17 CEMEX	0.00	1.67	0.00	0.00	0.87	0.00	0.00	0.43	0.00
190 CHANG230	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
191 CHANG115	0.59	1.61	0.16	0.28	0.84	0.07	0.64	0.40	0.56
192 CHANG34	0.59	1.61	0.16	0.28	0.84	0.07	0.64	0.40	0.56
20 CH_AZUL	0.72	2.58	0.12	0.34	1.31	0.06	0.79	1.18	0.23
23 CH115	0.00	1.67	0.00	0.00	0.87	0.00	0.00	0.43	0.00
30 MAR115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
317 MENDRE13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
321 CALDERA34_5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33 STM115	0.03	1.60	0.01	0.02	0.84	0.00	0.04	0.39	0.03
37 SAN115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
48 TINAJ115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50 M_O115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
511 LGUIAS230	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
512 LGUIAS 34_5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
515 PANPOWER230	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
516 PANAPOW13A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
52 TOC115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
522 TBALBOA 115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
523 TBALBOA 13A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
524 TBALBOA 13B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
525 TATLANTIC13A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
526 TATLANTIC13B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54 LM1115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55 LM2115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



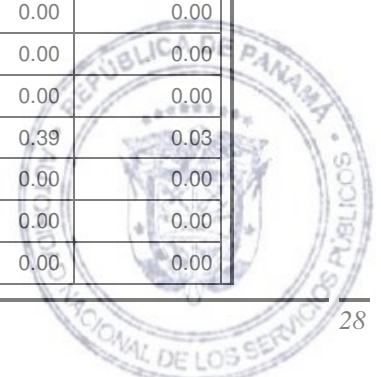
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BARRA	2009								
	MÁXIMA						MÍNIMA		
	INVIERNO			VERANO			INVIERNO Y VERANO		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
56 L_M_44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
57 L_M_13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
58 MHOPE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6 CHO115	0.00	0.00	0.04	0.00	0.00	0.02	0.00	0.00	0.14
6000 FRONTER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
61 FFIELD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
63 RCITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
64 COLON44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
66 BLM13B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67 BLM13C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68 BLM13D	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69 TGJB13_8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7 CHO34	0.00	0.00	0.04	0.00	0.00	0.02	0.00	0.00	0.14
70 TGJB13A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
71 TGJB13B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
72 BLMCCA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73 BLMCCB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86 CC13_8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87 CAL115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9 LSA115	0.00	0.00	0.04	0.00	0.00	0.02	0.00	0.00	0.14



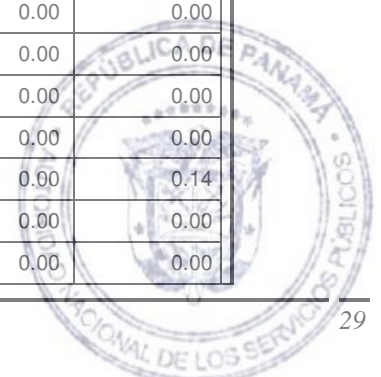
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BARRA	2010								
	MÁXIMA						MÍNIMA		
	INVIERNO			VERANO			INVIERNO Y VERANO		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
10 L_S_34	0.00	0.00	0.03	0.00	0.00	0.02	0.00	0.00	0.14
100 BAY230	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.48	0.20
101 BAY13A	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.48	0.20
102 BAY13B	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.48	0.20
103 COPESA23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
104 COPESA13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
108 BAY13C	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.48	0.20
109 STA RITA115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110 PTMD115A	0.00	0.02	0.00	0.00	0.01	0.00	0.00	0.01	0.00
111 PTMD115B	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00
14 PRO230	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 PRO115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
154 CEMPAN15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16 PRO34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
17 CEMEX	0.00	1.77	0.00	0.00	0.88	0.00	0.00	0.43	0.00
190 CHANG230	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
191 CHANG115	0.56	1.71	0.14	0.27	0.85	0.07	0.64	0.40	0.56
192 CHANG34	0.56	1.71	0.14	0.27	0.85	0.07	0.64	0.40	0.56
20 CH_AZUL	0.68	2.70	0.11	0.34	1.33	0.05	0.79	1.19	0.23
23 CH115	0.00	1.77	0.00	0.00	0.88	0.00	0.00	0.43	0.00
30 MAR115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
317 MENDRE13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
321 CALDERA34_5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33 STM115	0.03	1.71	0.01	0.02	0.84	0.00	0.04	0.39	0.03
37 SAN115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
48 TINAJ115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50 M_O115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



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BARRA	2010								
	MÁXIMA						MÍNIMA		
	INVIERNO			VERANO			INVIERNO Y VERANO		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
511 LGUIAS230	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
512 LGUIAS 34_5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
515 PANPOWER230	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
516 PANAPOW13A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
52 TOC115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
522 TBALBOA 115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
523 TBALBOA 13A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
524 TBALBOA 13B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
525 TATLANTIC13A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
526 TATLANTIC13B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54 LM1115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55 LM2115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
56 L_M_44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
57 L_M_13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
58 MHOPE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6 CHO115	0.00	0.00	0.03	0.00	0.00	0.02	0.00	0.00	0.14
6000 FRONTER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
61 FFIELD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
63 RCITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
64 COLON44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
66 BLM13B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67 BLM13C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68 BLM13D	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69 TGJB13_8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7 CHO34	0.00	0.00	0.03	0.00	0.00	0.02	0.00	0.00	0.14
70 TGJB13A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
71 TGJB13B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



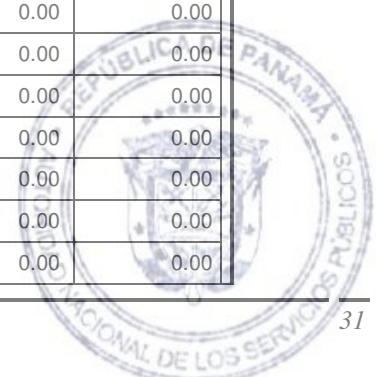
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BARRA	2010								
	MÁXIMA						MÍNIMA		
	INVIERNO			VERANO			INVIERNO Y VERANO		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
72 BLMCCA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73 BLMCCB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86 CC13_8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87 CAL115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9 LSA115	0.00	0.00	0.03	0.00	0.00	0.02	0.00	0.00	0.14

BARRA	2011								
	MÁXIMA						MÍNIMA		
	INVIERNO			VERANO			INVIERNO Y VERANO		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
10 L_S_34	0.00	0.00	0.03	0.00	0.00	0.02	0.00	0.00	0.18
100 BAY230	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.40	0.24
101 BAY13A	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.40	0.24
102 BAY13B	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.40	0.24
103 COPESA23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
104 COPESA13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
108 BAY13C	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.40	0.24
109 STA RITA115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110 PTMD115A	0.00	0.02	0.00	0.00	0.01	0.00	0.00	0.01	0.00
111 PTMD115B	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.01
14 PRO230	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 PRO115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
154 CEMPAN15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



BARRA	2011								
	MÁXIMA						MÍNIMA		
	INVIERNO			VERANO			INVIERNO Y VERANO		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
16 PRO34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
17 CEMEX	0.00	1.80	0.00	0.00	0.85	0.00	0.00	0.35	0.00
190 CHANG230	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
191 CHANG115	0.55	1.73	0.14	0.28	0.82	0.07	0.66	0.33	0.71
192 CHANG34	0.55	1.73	0.14	0.28	0.82	0.07	0.66	0.33	0.71
20 CH_AZUL	0.67	2.72	0.11	0.34	1.30	0.06	0.81	1.11	0.26
23 CH115	0.00	1.80	0.00	0.00	0.85	0.00	0.00	0.35	0.00
30 MAR115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
317 MENDRE13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
321 CALDERA34_5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33 STM115	0.03	1.73	0.01	0.02	0.81	0.00	0.04	0.32	0.04
37 SAN115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
48 TINAJ115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50 M_O115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
511 LGUIAS230	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
512 LGUIAS 34_5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
515 PANPOWER230	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
516 PANAPOW13A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
52 TOC115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
522 TBALBOA 115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
523 TBALBOA 13A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
524 TBALBOA 13B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
525 TATLANTIC13A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
526 TATLANTIC13B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54 LM1115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55 LM2115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
56 L_M_44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



Handwritten signature or initials.

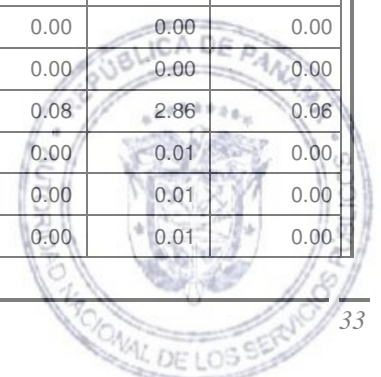
BARRA	2011								
	MÁXIMA						MÍNIMA		
	INVIERNO			VERANO			INVIERNO Y VERANO		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
57 L_M_13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
58 MHOPE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6 CHO115	0.00	0.00	0.03	0.00	0.00	0.02	0.00	0.00	0.18
6000 FRONTER	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
61 FFIELD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
63 RCITY	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
64 COLON44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
66 BLM13B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67 BLM13C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68 BLM13D	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69 TGJB13_8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7 CHO34	0.00	0.00	0.03	0.00	0.00	0.02	0.00	0.00	0.18
70 TGJB13A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
71 TGJB13B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
72 BLMCCA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73 BLMCCB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86 CC13_8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87 CAL115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9 LSA115	0.00	0.00	0.03	0.00	0.00	0.02	0.00	0.00	0.18



de

12. Indicadores promedio Anual de confiabilidad por Barras

BARRA	2008			2009			2010			2011		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
10 L_S_34	0.00	0.00	0.18	0.00	0.00	0.20	0.00	0.00	0.19	0.00	0.00	0.23
100 BAY230	0.27	0.63	0.15	0.27	0.48	0.19	0.27	0.48	0.20	0.27	0.40	0.24
101 BAY13A	0.27	0.63	0.15	0.27	0.48	0.19	0.27	0.48	0.20	0.27	0.40	0.24
102 BAY13B	0.27	0.63	0.15	0.27	0.48	0.19	0.27	0.48	0.20	0.27	0.40	0.24
103 COPESA23	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00
104 COPESA13	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00
108 BAY13C	0.27	0.63	0.15	0.27	0.48	0.19	0.27	0.48	0.20	0.27	0.40	0.24
109 STA RITA115	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110 PTMD115A	0.00	0.05	0.00	0.00	0.04	0.00	0.00	0.04	0.00	0.00	0.04	0.00
111 PTMD115B	0.00	0.03	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.00	0.02	0.01
14 PRO230	0.26	2.93	0.06	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00
15 PRO115	0.26	2.93	0.08	0.00	0.01	0.02	0.00	0.01	0.02	0.00	0.01	0.03
154 CEMPAN15	0.01	3.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16 PRO34	0.26	2.93	0.08	0.00	0.01	0.02	0.00	0.01	0.02	0.00	0.01	0.03
17 CEMEX	0.01	3.31	0.00	0.01	2.97	0.00	0.01	3.07	0.00	0.01	2.99	0.00
190 CHANG230	0.50	3.28	0.10	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00
191 CHANG115	1.98	6.47	0.55	1.51	2.86	0.79	1.48	2.96	0.78	1.49	2.88	0.92
192 CHANG34	1.98	6.47	0.55	1.51	2.86	0.79	1.48	2.96	0.78	1.49	2.88	0.92
20 CH_AZUL	2.07	8.33	0.33	1.85	5.08	0.41	1.80	5.23	0.39	1.82	5.13	0.42
23 CH115	0.01	3.31	0.00	0.01	2.97	0.00	0.01	3.07	0.00	0.01	2.99	0.00
30 MAR115	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00
317 MENDRE13	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00
321 CALDERA34_5	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00
33 STM115	0.08	3.17	0.04	0.09	2.83	0.04	0.08	2.94	0.04	0.08	2.86	0.06
37 SAN115	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00
48 TINAJ115	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00
50 M_O115	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00



BARRA	2008			2009			2010			2011		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
511 LGUIAS230	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00
512 LGUIAS 34_5	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00
515 PANPOWER230	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00
516 PANAPOW13A	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00
52 TOC115	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00
522 TBALBOA 115	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
523 TBALBOA 13A	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
524 TBALBOA 13B	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
525 TATLANTIC13A	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
526 TATLANTIC13B	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54 LM1115	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55 LM2115	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
56 L_M_44	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
57 L_M_13	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
58 MHOPE	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6 CHO115	0.00	0.00	0.18	0.00	0.00	0.20	0.00	0.00	0.19	0.00	0.00	0.23
6000 FRONTER	0.30	5.56	0.03	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00
61 FFIELD	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00
63 RCITY	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
64 COLON44	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
66 BLM13B	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67 BLM13C	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68 BLM13D	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69 TGJB13_8	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7 CHO34	0.00	0.00	0.18	0.00	0.00	0.20	0.00	0.00	0.19	0.00	0.00	0.23
70 TGJB13A	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
71 TGJB13B	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
72 BLMCCA	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73 BLMCCB	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



BARRA	2008			2009			2010			2011		
	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año	AIT Horas/Año	AIF Sal/Año	AID Horas/Año
86 CC13_8	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87 CAL115	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00
9 LSA115	0.00	0.00	0.18	0.00	0.00	0.20	0.00	0.00	0.19	0.00	0.00	0.23



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