Plan de Expansión del Sistema Interconectado Nacional
2019 – 2033

Tomo II
Plan Indicativo de Generación

Tomo II - Anexo 2

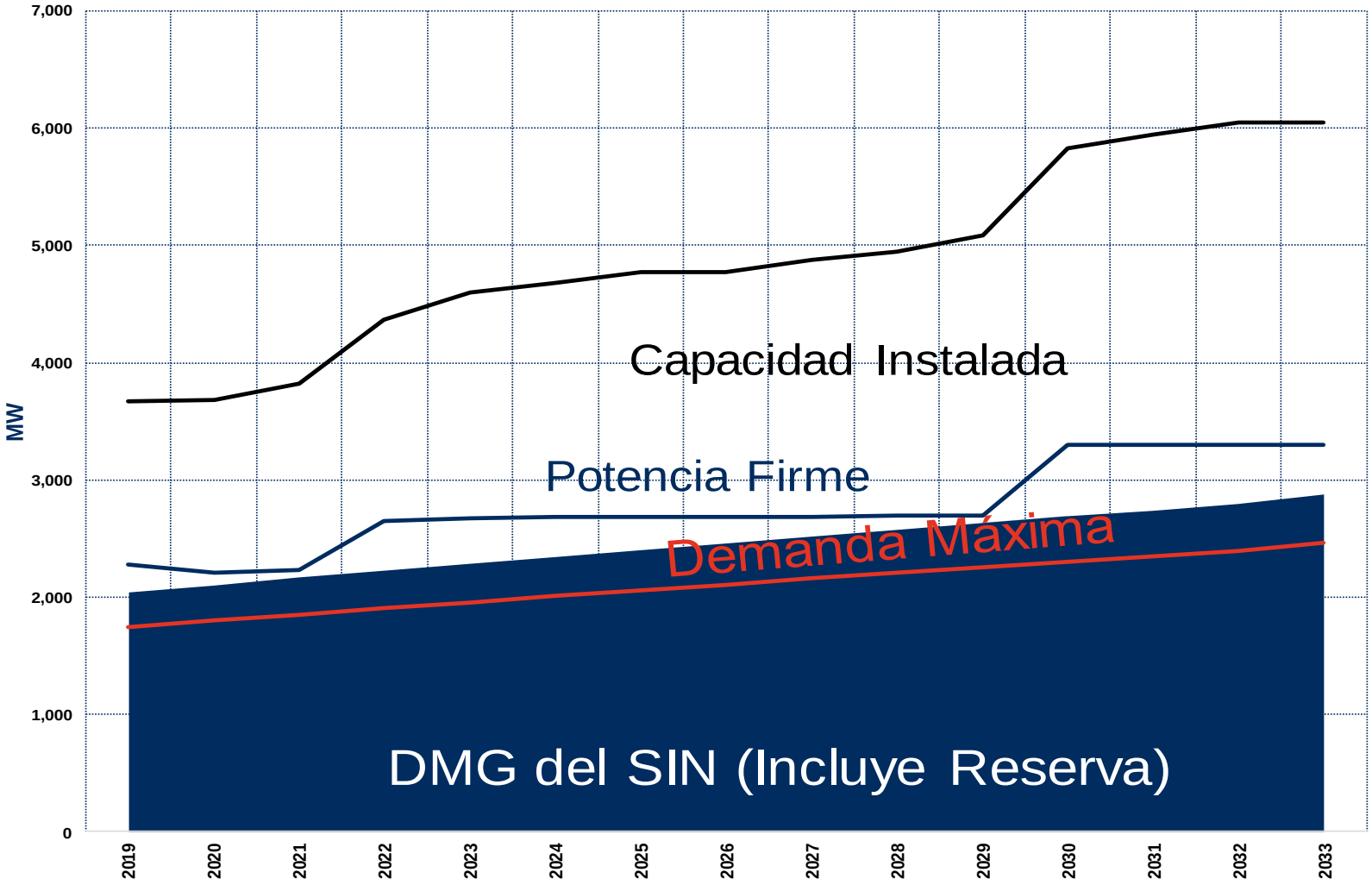
Salidas del Escenario Alternativo I:

Escenario renovable considerando:

La mayor cantidad de recursos renovables disponibles en el país. Se agregan 2505.31 MW de capacidad al sistema actual, donde el 7.34% corresponde a proyectos hidroeléctricos (183.87 MW), el 45.23% corresponde a plantas termoeléctricas (1133.20 MW) y el 47.43% restante en proyectos renovables (Eólicos – 639.40 MW, Solar – 548.85 MW).

ETESA
Unimos Panamá con Energía

Gráfico N° A2.1 Balance de Potencia vs Demanda del Alternativo I



Cuadro N° A2.1 Capacidad Firme Escenario Alternativo I

Agente Generador	Nombre	Capacidad Instalada (MW)	Potencia Efectiva (MW)	Potencia Firme (MW)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
AES Changuinola, S.A.	Changuinola I	212.40	212.40	165.67	165.67	165.67	165.67	165.67	165.67	165.67	165.67	165.67	165.67	165.67	165.67	165.67	165.67	165.67	165.67
AES Changuinola, S.A.	Mini Chan	9.77	9.70	9.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66	9.66
AES Panamá, S.A.	Bayano	260.00	260.00	160.12	160.12	160.12	160.12	160.12	160.12	160.12	160.12	160.12	160.12	160.12	160.12	160.12	160.12	160.12	160.12
AES Panamá, S.A.	La Estrella	47.20	46.00	16.13	16.13	16.13	16.13	16.13	16.13	16.13	16.13	16.13	16.13	16.13	16.13	16.13	16.13	16.13	16.13
AES Panamá, S.A.	Los Valles	54.76	54.00	17.63	17.63	17.63	17.63	17.63	17.63	17.63	17.63	17.63	17.63	17.63	17.63	17.63	17.63	17.63	17.63
AES Panamá, S.A.	Estí	120.00	120.00	112.67	112.67	112.67	112.67	112.67	112.67	112.67	112.67	112.67	112.67	112.67	112.67	112.67	112.67	112.67	112.67
Alternegy, S.A.	Lorena	37.60	33.84	30.62	30.62	30.62	30.62	30.62	30.62	30.62	30.62	30.62	30.62	30.62	30.62	30.62	30.62	30.62	30.62
Alternegy, S.A.	Prudencia	62.78	60.89	50.09	50.09	50.09	50.09	50.09	50.09	50.09	50.09	50.09	50.09	50.09	50.09	50.09	50.09	50.09	50.09
Bontex, S.A.	Gualaca	25.60	25.47	23.04	23.04	23.04	23.04	23.04	23.04	23.04	23.04	23.04	23.04	23.04	23.04	23.04	23.04	23.04	23.04
Caldera Energy Corp.	Mendre	19.75	19.75	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92
Corporación de Energía del Istmo Ltd.	Las Cruces	19.47	18.62	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17
Corporación de Energía del Istmo Ltd.	Las Cruces	0.97	0.79	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Electrogeneradora del Istmo, S.A	Mendre II	8.12	7.80	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56
Electron Investment	Monte Lirio	53.75	53.72	32.38	32.38	32.38	32.38	32.38	32.38	32.38	32.38	32.38	32.38	32.38	32.38	32.38	32.38	32.38	32.38
Empresa Nacional de Energia, S.A	Bugaba I	5.14	5.14	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51
Empresa Nacional de Energia, S.A	Bugaba 2	6.33	6.33	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36	1.36
ENEL Fortuna, S.A.	Fortuna	300.00	300.00	289.49	289.49	289.49	289.49	289.49	289.49	289.49	289.49	289.49	289.49	289.49	289.49	289.49	289.49	289.49	289.49
Energía y Servicios de Panamá, S.A. (ESEPSA)	Algarrobos	9.86	9.86	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41	2.41
Energía y Servicios de Panamá, S.A. (ESEPSA)	Dolega	3.13	3.12	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Energía y Servicios de Panamá, S.A. (ESEPSA)	La Yeguada	8.20	7.20	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Energía y Servicios de Panamá, S.A. (ESEPSA)	Macho Monte	2.40	2.40	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Fountain Intertrade Corp.	La Potra (Bajo Frio)	27.90	27.60	8.66	8.66	8.66	8.66	8.66	8.66	8.66	8.66	8.66	8.66	8.66	8.66	8.66	8.66	8.66	8.66
Fountain Intertrade Corp.	Salsipuedes (Bajo Frio)	27.90	27.68	8.66	8.66	8.66	8.66	8.66	8.66	8.66	8.66	8.66	8.66	8.66	8.66	8.66	8.66	8.66	8.66
Fountain Intertrade Corp.	La Potra G4 (Bajo Frio)	2.10	2.05	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10
Generadora Alto Valle, S.A.	Cochea	15.50	15.44	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06	3.06
Generadora del Istmo S.A.	Barro Blanco	26.80	26.77	11.57	11.57	11.57	11.57	11.57	11.57	11.57	11.57	11.57	11.57	11.57	11.57	11.57	11.57	11.57	11.57
Generadora del Istmo S.A.	Barro Blanco Minicentral	1.88	1.83	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Generadora Pedregalito, S.A.	Pedregalito I	21.00	19.90	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04
Generadora Río Chico S.A.	Pedregalito II	13.49	12.52	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
Hidro Boquerón, S.A.	Macano	5.25	5.25	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hidro Piedra, S.A.	RP-490	14.30	12.00	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37	3.37
Hidro Piedra, S.A.	La Cuchilla	8.40	8.23	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31	1.31
Hidroecológica del Teribe, S.A	Bonyic	31.31	30.00	22.22	22.22	22.22	22.22	22.22	22.22	22.22	22.22	22.22	22.22	22.22	22.22	22.22	22.22	22.22	22.22
Hidroeléctrica Bajos del Totuma, S.A.	Bajo de Totumas	6.33	6.30	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42	2.42
Hidroeléctrica San Lorenzo S.A.	San Lorenzo	8.70	8.26	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Hidroibérica, S.A.	El Fraile	6.71	6.71	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Hydro Caisán, S.A.	El Alto	75.00	72.84	22.14	22.14	22.14	22.14	22.14	22.14	22.14	22.14	22.14	22.14	22.14	22.14	22.14	22.14	22.14	22.14
Ideal Panamá, S.A	Bajo de Mina	56.80	56.80	20.07	20.07	20.07	20.07	20.07	20.07	20.07	20.07	20.07	20.07	20.07	20.07	20.07	20.07	20.07	20.07
Ideal Panamá, S.A	Baitún	85.90	85.90	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09	31.09
Ideal Panamá, S.A	Bajo de Mina G3	0.60	0.60	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Ideal Panamá, S.A	Baitún G3	1.73	1.70	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Istmus Hydropower Corp	Concepción	11.00	10.00	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.49
Las Perlas Norte, S.A	Las Perlas Norte	10.00	10.00	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46
Las Perlas Sur, S.A	Las Perlas Sur	10.00	10.00	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46	2.46
Paso Ancho Hydro-Power, Corp.	Paso Ancho	6.16	6.10	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08	3.08
Saltos de Francoli S.A.	Los Planetas I	4.82	4.20	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Saltos de Francoli S.A.	Los Planetas 2	8.89	7.38	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35
Total Hidroeléctrico		**1755.69**	**1755.69**	**1083.10**	**1083.10**	**1083.10**	**1083.10**	**1083.10**	**1083.10**	**1083.10**	**1083.10**	**1083.10**	**1083.10**	**1083.10**	**1083.10**	**1083.10**	**1083.10**	**1083.10**	**1083.10**

Cuadro N° A2.1 Capacidad Firme Escenario Alternativo I (Continuación)

Agente Generador	Nombre	Capacidad Instalada (MW)	Potencia Efectiva (MW)	Potencia Firme (MW)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
AES Panamá, S.A.	Estrella del Mar (Barcaza)	72.00	71.20	63.27	63.27	63.27	63.27	63.27	63.27	63.27	63.27	63.27	63.27	63.27	63.27	63.27	63.27	63.27	63.27
Alternegy, S.A.	Cativa	87.00	83.50	61.16	61.16	61.16	61.16	61.16	61.16	61.16	61.16	61.16	61.16	61.16	61.16	61.16	61.16	61.16	61.16
Autoridad del Canal de Panamá	Miraflores G9	40.81	38.95	35.53	35.53	35.53	35.53	35.53	35.53	35.53	35.53	35.53	35.53	35.53	35.53	35.53	35.53	35.53	35.53
Autoridad del Canal de Panamá	Miraflores G10	40.81	38.95	34.32	34.32	34.32	34.32	34.32	34.32	34.32	34.32	34.32	34.32	34.32	34.32	34.32	34.32	34.32	34.32
Autoridad del Canal de Panamá	Miraflores G5	18.00	17.55	13.55	13.55	13.55	13.55	13.55	13.55	13.55	13.55	13.55	13.55	13.55	13.55	13.55	13.55	13.55	13.55
Bahía Las Minas Corp.	J. Brown G5	33.00	32.42	21.75	21.75														
Bahía Las Minas Corp.	J. Brown G6	33.00	32.42	23.61	23.61														
Bahía Las Minas Corp.	BLM 8	34.00	33.40	26.50	26.50														
Bahía Las Minas Corp.	BLM Carbón (BLM 2)	36.67	36.67	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88	6.88
Bahía Las Minas Corp.	BLM Carbón (BLM 3)	36.67	36.67	12.27	12.27	12.27	12.27	12.27	12.27	12.27	12.27	12.27	12.27	12.27	12.27	12.27	12.27	12.27	12.27
Bahía Las Minas Corp.	BLM Carbón (BLM 4)	36.67	36.67	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95	13.95
Bahía Las Minas Corp.	BLM 9 Carbón	56.14	38.18	10.04	10.04	10.04	10.04	10.04	10.04	10.04	10.04	10.04	10.04	10.04	10.04	10.04	10.04	10.04	10.04
Energyst International B.V.	Cerro Azul MT XOC1600	27.00	26.52	25.38	25.38	25.38	25.38	25.38	25.38	25.38	25.38	25.38	25.38	25.38	25.38	25.38	25.38	25.38	25.38
Gas Natural Atlantico S de R.L.	Costa Norte TG 1	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31
Gas Natural Atlantico S de R.L.	Costa Norte TG 3	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31
Gas Natural Atlantico S de R.L.	Costa Norte TG 4	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31	77.31
Gas Natural Atlantico S de R.L.	Costa Norte TV	149.07	149.07	149.07	149.07	149.07	149.07	149.07	149.07	149.07	149.07	149.07	149.07	149.07	149.07	149.07	149.07	149.07	149.07
Generadora del Atlántico S.A.	Termo Colón G1	50.00	48.30	46.02	46.02	46.02	46.02	46.02	46.02	46.02	46.02	46.02	46.02	46.02	46.02	46.02	46.02	46.02	46.02
Generadora del Atlántico S.A.	Termo Colón G2	50.00	48.30	45.58	45.58	45.58	45.58	45.58	45.58	45.58	45.58	45.58	45.58	45.58	45.58	45.58	45.58	45.58	45.58
Generadora del Atlántico S.A.	Termo Colón G3	50.00	47.90	41.28	41.28	41.28	41.28	41.28	41.28	41.28	41.28	41.28	41.28	41.28	41.28	41.28	41.28	41.28	41.28
Jinro Corporation	Jinro Power	57.83	54.88	52.97	52.97	52.97	52.97	52.97	52.97	52.97	52.97	52.97	52.97	52.97	52.97	52.97	52.97	52.97	52.97
Kanan Overseas 1, INC.	Barcaza La Esperanza	129.36	129.36	88.50	88.50	88.50	88.50	88.50	88.50	88.50	88.50	88.50	88.50	88.50	88.50	88.50	88.50	88.50	88.50
Pan Am Generating Ltd	Panam	99.60	96.00	88.87	88.87	88.87	88.87	88.87	88.87	88.87	88.87	88.87	88.87	88.87	88.87	88.87	88.87	88.87	88.87
Pan Am Generating Ltd	Amp. Panam	49.80	48.00	43.20	43.20	43.20	43.20	43.20	43.20	43.20	43.20	43.20	43.20	43.20	43.20	43.20	43.20	43.20	43.20
Pedregal Power Company	Pacora	55.34	53.52	50.41	50.41	50.41	50.41	50.41	50.41	50.41	50.41	50.41	50.41	50.41	50.41	50.41	50.41	50.41	50.41
Urbalia Panamá, S.A.	Cerro Patacón	8.15	3.75	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29	3.29
Minera Panamá, S.A.	Cobre Panamá - PACO Power Plant Und1	153.00**	137.00**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Termoeléctrico		**1482.85**	**1434.11**	**1189.33**	**1189.33**	**1117.47**	**1117.47**	**1117.47**	**1117.47**	**1117.47**	**1117.47**	**1117.47**	**1117.47**	**1117.47**	**1117.47**	**1117.47**	**1117.47**	**1117.47**	**1117.47**

Agente Generador	Nombre	Capacidad Instalada (MW)	Potencia Efectiva (MW)	Potencia Firme (MW)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
UEP Penonomé II, S. A.	Rosa de los Vientos Etapa I	52.50	52.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UEP Penonomé II, S. A.	Marañón	17.50	17.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UEP Penonomé I, S. A.	Nuevo Chagres	55.00	55.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UEP Penonomé II, S. A.	Portobello Ballestillas	32.50	32.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UEP Penonomé II, S. A.	Nuevo Chagres II	62.50	62.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UEP Penonomé II, S. A.	Rosa de los Vientos Etapa II	50.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Eólico		**270.00**	**270.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Agente Generador	Nombre	Capacidad Instalada (MW)	Potencia Efectiva (MW)	Potencia Firme (MW)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Empresa de Generación Eléctrica, S.A.	Sarigua	2.4	2.4	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enel Green Power Panamá, S.A.	Fotovoltaica Chiriquí	9.87	9.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Divisa Solar 10 MW, S.A.	Divisa Solar	9.90	8.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Llano Sanchez Solar Power, S.A.	Don Félix	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hidroibérica, S.A.	El Fraile Solar	0.48	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Azucarera Nacional	Cocle Solar	0.96	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Farallón Solar 2, S.A.	Farallón Solar 2	4.80	1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Empresa Nacional de Energia, S.A	Central Fotovoltaica Bugaba	2.40	2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar Coclé Venture, S. de R.L.	Miraflores Coclé	8.99	8.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar Azuero Venture, S. de R.L.	Miraflores Los Ángeles	9.52	9.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar Panamá Venture, S. de R.L.	Miraflores París	8.99	8.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sol Real Uno , S.A. (Enel Green Power Panamá, S.A.)	Generadora Solar Caldera	5.28	5.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sol Real Istmo, S.A. (Enel Green Power Panamá, S.A.)	Sol de David	7.92	7.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Llano Sánchez Solar Power Cuatro, S.A. (Enel Green Power Panamá, S.A.)	Vista Alegre	8.22	8.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Llano Sánchez Solar Powe One, S.A. (Enel Green Power Panamá, S.A.)	Milton Solar	10.26	10.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Llano Sánchez Solar Power Tres, S.A. (Enel Green Power Panamá, S.A.)	Sol Real	10.78	10.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PSZ1, S.A.	El Espinal	9.26	8.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Panamasolar2, S.A.	Pocrí	16.00	15.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sol Real Uno , S.A. (Enel Green Power Panamá, S.A.)	Estrella Solar	4.79	4.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tecnisol I, S.A.	IKAKO	10.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tecnisol II, S.A.	IKAKO I	10.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tecnisol III, S.A.	IKAKO II	10.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tecnisol IV, S.A.	IKAKO III	10.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Concepto Solar, S.A.	Bejuco Solar	0.96	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Solar		**173.78**	**167.55**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Total Renovable		**443.78**	**437.55**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Total Existente		**3682.33**	**3627.35**	**2272.44**	**2272.44**	**2200.58**	**2200.58**	**2200.58**	**2200.58**	**2200.58**	**2200.58**	**2200.58**	**2200.58**	**2200.58**	**2200.58**	**2200.58**	**2200.58**	**2200.58**	**2200.58**

Cuadro N° A2.1 Capacidad Firme Escenario Alternativo I (Continuación)

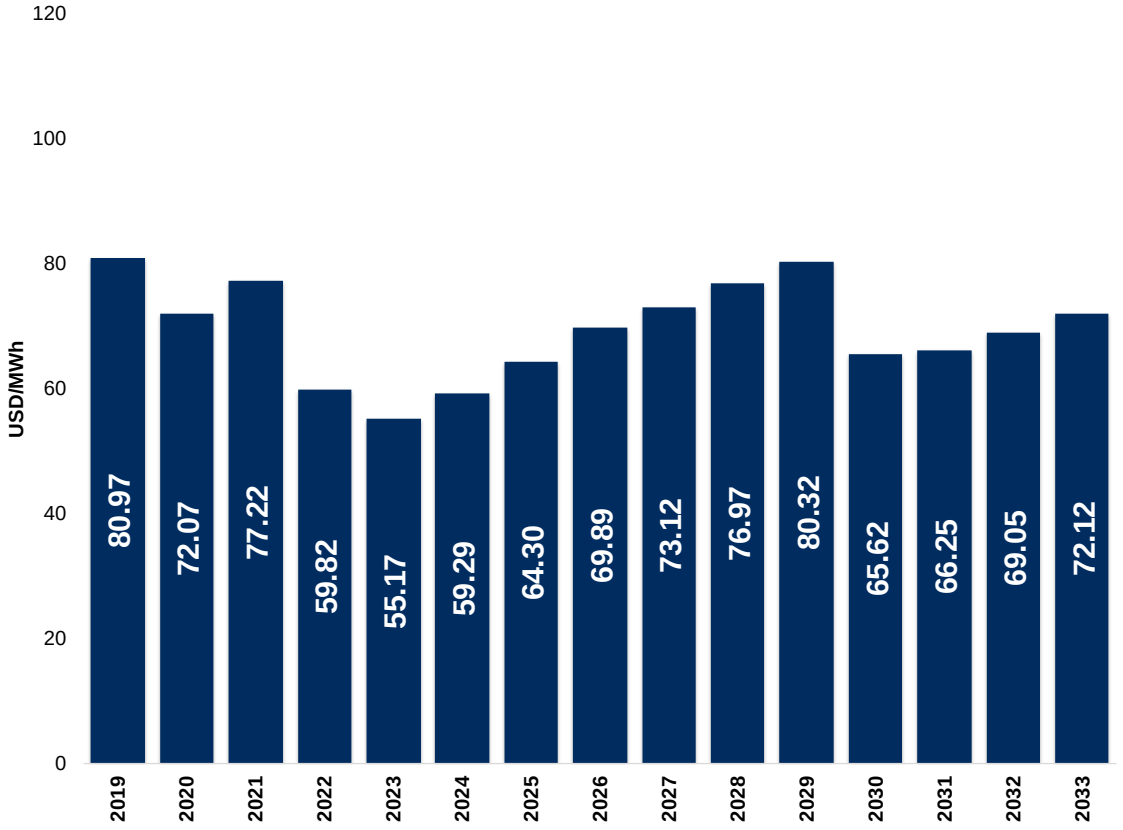
Proyectos Hidroeléctricos (Futuros)	Nombre	Capacidad Instalada (MW)	Potencia Efectiva (MW)	Potencia Firme (MW)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Desarrollos Hidroeléctricos Corp.	San Andres	9.89	9.57	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54
Electron Investment	Pando	37.00	33.30	25.13		25.13	25.13	25.13	25.13	25.13	25.13	25.13	25.13	25.13	25.13	25.13	25.13	25.13	25.13
Hidroeléctrica Barriles, S.A.	Colorado	5.14	4.74	1.94				1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94	1.94
Hydro Caisán, S.A.	El Alto G4	1.17	1.11	n/d					n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
Hidro Burica, S.A.	Burica	65.30	63.00	22.31					22.31	22.31	22.31	22.31	22.31	22.31	22.31	22.31	22.31	22.31	22.31
Navitas Internacional, S.A.	Chuspa	8.80	8.80	2.30					2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30
Hidroeléctrica Tizingal S.A.	Tizingal	4.64	4.64	2.55					2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55
Los Naranjos Overseas, S.A.	El Sindigo	10.00	10.00	1.28					1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28
Empresa Nacional de Energia, S.A	La Herradura	5.48	5.20	1.03						1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Hidroeléctrica Barriles, S.A.	Barriles	1.00	1.00	0.13						0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Hidroeléctrica Barriles, S.A.	Cotito	5.00	5.00	4.00						4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Corporación de Energia del Istmo Ltd.	San Bartolo	19.44	19.44	6.64							6.64	6.64	6.64	6.64	6.64	6.64	6.64	6.64	6.64
Corporación de Energia del Istmo Ltd.	San Bartolo Minicentral	1.00	1.00	1.00							1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Empresa Nacional de Energia, S.A	El Recodo	10.01	10.00	3.25										3.25	3.25	3.25	3.25	3.25	3.25
Total Hidroeléctrico Futuro		**183.87**	**176.80**	**74.09**	**2.54**	**0.00**	**27.67**	**29.61**	**58.05**	**63.20**	**70.84**	**70.84**	**70.84**	**74.09**	**74.09**	**74.09**	**74.09**	**74.09**	**74.09**

Proyectos Termoeléctricos (Futuros)	Nombre	Capacidad Instalada (MW)	Potencia Efectiva (MW)	Potencia Firme (MW)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Minera Panamá, S.A.	Cobre Panamá - PACO Power Plant Und2	153.00**	137.00**	0.00															
Tropitermica, S.A.	Tropitermica	5.10	5.10	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34
Sinolam Smarter Energy LNG Power Co. Inc.	Gas To Power Panamá GTPP	458.10	424.70	412.29				412.29	412.29	412.29	412.29	412.29	412.29	412.29	412.29	412.29	412.29	412.29	412.29
Panamá NG Power, S.A	Telfers	670.00	656.16	603.00												603.00	603.00	603.00	603.00
Total Termoeléctrico Futuro		**1133.20**	**1085.96**	**1019.63**	**4.34**	**4.34**	**4.34**	**416.63**	**416.63**	**416.63**	**416.63**	**416.63**	**416.63**	**416.63**	**416.63**	**1019.63**	**1019.63**	**1019.63**	**1019.63**

Proyectos Solares (Futuros)	Nombre	Capacidad Instalada (MW)	Potencia Efectiva (MW)	Potencia Firme (MW)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Panasolar Generation, S.A.	Panasolar Generation	9.90	9.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solpac Investment, S.A.	Pacora II Etapa 1	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Farallón Solar 2, S.A.	Farallón Solar 2	0.96	0.96	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Photovoltaics Investments Corp.	Ecosolar	10.00	10.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Green Electric, S.A.	La Mata Etapa 1	2.00	2.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jagüito Solar 10 MW, S.A.	Jagüito Solar	9.99	9.99	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Providencia Solar 1, S.A.	Providencia Solar 1	9.95	9.95	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avanzalia Panamá S.A.	Solar Penonomé Etapa 1	60.00	60.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Progreso Solar 20 MW, S.A.	La Esperanza Solar	19.99	19.99	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Celsolar, S.A.	Celsia Solar Prudencia	10.58	10.58	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bajo Frío PV S.A.	Bajo Frio Solar	19.95	19.95	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Farallón Solar 2, S.A.	Farallón Solar 2 Etapa 2	5.16	5.16	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Green Electric, S.A.	La Mata Etapa 2	3.00	3.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Llano Sanchez Solar Power, S.A.	Don Félix Etapa 2	7.99	7.99	0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Generadora de Energia Renovable, S.A	Campo Solar La Victoria	10.00	10.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avanzalia Panamá S.A.	Solar Penonomé Etapa 2	60.00	60.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SDR Energy Panama, S.A	Parque Solar Progreso 19.8MW	19.80	19.80	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Solar Zona Coclé 20	9.96	9.96	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Generadora Solar el Puerto, S.A.	Baco Solar	25.90	25.90	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Generadora Solar Austral, S.A.	Madre Vieja Solar	25.90	25.90	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Green Electric, S.A.	La Mata Etapa 3	5.00	5.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Solar Zona Herrera 01	8.00	8.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Solar Zona Coclé 25	30.00	30.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Solar Zona Panamá Oeste 01	10.00	10.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Solar Zona Coclé 10	10.00	10.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Solar Zona Coclé 12	9.99	9.99	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Solar Zona Coclé 19	9.95	9.95	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Solar Zona Coclé 02	40.00	40.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Solar Zona Coclé 09	5.00	5.00	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Solar Zona Chiriquí 21	17.30	17.30	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Solar Zona Chiriquí 03	10.00	10.00	0.00									0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Solar Zona Chiriquí 11	19.89	19.89	0.00									0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Solar Zona Coclé 21	9.95	9.95	0.00									0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Solar Zona Chiriquí 13	19.80	19.80	0.00										0.00	0.00	0.00	0.00	0.00	0.00
	Solar Zona Coclé 22	9.95	9.95	0.00										0.00	0.00	0.00	0.00	0.00	0.00
	Solar Zona Coclé 24	10.00	10.00	0.00										0.00	0.00	0.00	0.00	0.00	0.00
Total Solar Futuro		**548.85**	**548.85**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Proyectos Eólicos (Futuros) MW	Nombre	Capacidad Instalada (MW)	Potencia Efectiva (MW)	Potencia Firme (MW)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Parque Eólico Toabré, S.A.	Toabré Etapa 1	66.00	66.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UEP Penonomé II, S. A.	Penonome III	69.00	69.00	0.00					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Eólico Zona Coclé 01	22.00	22.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Eólico Zona Panamá 01	32.00	32.00	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Eólico Zona Coclé 05	22.00	22.00	0.00										0.00	0.00	0.00	0.00	0.00	0.00
	Eólico Zona Panamá 02	136.00	136.00	0.00											0.00	0.00	0.00	0.00	0.00
	Eólico Zona Coclé 04	80.00	80.00	0.00												0.00	0.00	0.00	0.00
	Eólico Zona Veraguas 04	108.00	108.00	0.00													0.00	0.00	0.00
	Eólico Zona Veraguas 01	104.40	104.40	0.00														0.00	0.00
Total Eólico Futuro		**639.40**	**639.40**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

CUADRO N° A2.2: Costos Marginales del Escenario Alternativo I



Costo Marginal de Demanda
$/MWh

Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Prom
2019	85.99	91.46	91.68	101.20	93.50	88.15	84.04	78.30	72.22	66.66	57.88	60.59	80.97
2020	73.61	82.95	84.89	94.04	84.99	78.92	74.60	64.59	60.12	50.50	54.27	61.34	72.07
2021	80.75	92.82	91.36	100.31	93.03	89.73	80.49	72.44	64.75	51.12	51.24	58.55	77.22
2022	65.61	67.61	65.77	72.68	66.32	60.78	57.91	55.81	53.32	48.10	47.97	55.91	59.82
2023	61.32	66.47	64.17	69.90	64.30	58.76	56.08	52.37	49.69	39.73	35.35	43.91	55.17
2024	63.12	70.45	66.75	75.46	68.62	62.15	59.78	56.08	55.73	45.49	39.74	48.13	59.29
2025	68.24	72.89	69.54	76.77	71.28	66.06	64.21	61.31	60.11	55.76	49.51	55.89	64.30
2026	73.02	76.80	74.13	86.31	82.63	73.34	68.09	64.03	62.66	61.45	57.10	59.10	69.89
2027	76.59	80.13	77.67	92.04	83.19	73.55	69.56	66.79	65.98	67.10	59.10	65.77	73.12
2028	79.38	82.46	79.16	93.88	88.64	78.78	73.58	69.80	68.58	72.74	64.94	71.72	76.97
2029	82.65	83.19	82.39	96.38	95.37	84.19	77.76	71.81	70.28	74.17	71.87	73.77	80.32
2030	67.95	74.33	68.39	72.24	68.99	66.06	64.27	61.89	60.77	63.52	58.24	60.81	65.62
2031	65.85	73.83	68.06	72.36	70.02	67.18	64.84	62.90	62.98	66.33	60.17	60.52	66.25
2032	64.40	74.14	70.36	76.68	72.96	69.23	67.13	66.03	65.93	70.11	67.08	64.51	69.05
2033	70.38	77.78	71.54	81.57	74.91	70.90	68.99	67.74	67.91	72.64	71.18	69.95	72.12

CUADRO N° A2.3: Informe Final de Generación del Escenario Alternativo I

	Informe Final de Generación														
Planta	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Algarrobos	48.92	49.87	48.69	48.21	49.28	48.93	46.66	48.76	48.86	49.11	47.35	56.13	55.07	55.40	57.20
Bajo de Mina G3	0.65	0.80	0.72	0.77	0.77	0.73	0.69	0.67	0.73	0.84	0.76	1.28	1.23	1.29	1.28
Bocas del Toro (Changuinol	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bajo de Totumas	30.58	30.41	30.02	29.71	30.17	30.44	29.09	29.90	30.22	30.59	29.32	32.82	32.71	32.34	33.31
Baitún G3	1.98	2.30	2.03	2.12	2.23	2.08	1.97	1.97	2.04	2.36	2.08	3.79	3.73	3.90	3.87
Baitún	315.30	303.30	295.24	290.96	291.82	300.64	288.59	288.89	299.27	306.05	287.43	418.53	423.48	422.75	425.87
Bajo de Mina	212.56	203.26	198.93	195.49	197.96	203.17	194.69	194.36	200.79	204.61	191.50	267.98	271.29	270.10	271.35
Barriles	0.00	0.00	0.00	0.00	0.00	0.70	0.69	0.68	0.69	0.71	0.68	0.70	0.76	0.78	0.78
Bayano	631.68	620.91	636.39	582.24	607.99	661.13	648.33	651.68	651.86	646.44	793.99	593.88	618.31	637.83	619.77
Barro Blanco Minicentral	12.69	13.02	12.90	12.99	12.95	12.97	13.03	12.98	12.86	13.03	12.97	13.27	13.26	13.25	13.27
Barro Blanco	95.05	98.24	95.73	95.76	98.26	98.32	93.95	96.02	95.82	98.20	95.36	106.97	105.06	108.47	106.72
Bonyic	156.03	160.21	154.30	155.05	156.46	153.56	152.87	156.88	154.36	156.31	152.94	172.72	171.81	171.39	175.36
Bocas del Toro Minicentral (	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bugaba I	20.41	20.60	20.12	20.11	20.02	20.59	20.19	20.02	20.33	20.98	20.08	22.29	22.66	22.77	23.05
Bugaba 2	12.88	14.66	13.81	12.95	13.22	13.75	12.00	13.10	13.04	13.51	11.78	17.54	16.82	17.49	19.22
Burica	0.00	0.00	0.00	0.00	1.72	1.39	1.10	1.25	0.99	1.12	1.49	17.21	17.33	16.79	16.69
Caña Blanca	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Changuinola I	242.72	1277.52	1252.84	1236.93	1261.29	1247.08	1232.02	1261.91	1258.39	1248.10	1056.69	1330.04	1324.58	1339.27	1355.08
Chuspa	0.00	0.00	0.00	0.00	45.79	46.92	47.04	47.87	46.27	46.75	46.36	49.83	49.87	50.73	50.81
Cochea	62.84	65.08	62.84	62.26	62.74	63.28	61.92	62.13	62.11	63.33	61.75	69.66	69.30	71.71	71.65
Colorado	0.00	0.00	0.00	1.01	21.68	21.96	21.68	21.51	21.60	22.06	21.44	21.82	23.71	23.81	23.88
Concepción	27.16	26.94	24.49	26.28	24.45	26.20	25.12	26.65	25.34	24.65	25.13	39.17	37.45	39.68	40.18
Cotito	0.00	0.00	0.00	0.00	0.00	20.04	19.71	19.53	19.69	20.20	19.44	19.91	24.19	24.36	24.39
La Cuchilla	50.77	48.79	47.27	47.20	45.45	45.05	46.16	45.33	45.28	45.17	45.24	49.33	48.51	48.84	49.60
Dolega	23.10	23.48	23.20	23.12	23.12	23.14	23.32	23.10	23.11	23.06	23.16	23.93	24.01	24.02	23.98
El Alto G4	0.00	0.00	0.00	0.00	0.56	0.59	0.55	0.52	0.65	0.78	0.57	1.14	0.94	1.05	0.99
El Alto	242.15	239.47	233.46	230.41	233.56	237.42	228.87	228.94	235.61	241.50	227.03	295.35	296.92	297.52	297.63
El Fraile	28.53	28.83	27.48	28.59	27.50	27.55	27.60	27.84	27.74	28.87	28.46	30.21	29.82	31.89	33.10
El Recodo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.24	41.62	43.66	47.17	46.86	46.23
Embalse Ficticio La Espera	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Está	659.42	667.83	663.58	646.56	645.55	652.43	634.18	651.67	638.78	650.58	650.48	728.03	726.80	740.34	766.62
La Estrella	262.37	271.42	264.96	259.62	264.75	265.74	259.75	266.27	261.28	264.22	260.22	264.38	260.61	263.53	267.89
Fortuna	1675.04	1636.43	1654.16	1644.26	1585.66	1594.40	1620.96	1676.26	1586.37	1663.72	1773.10	1564.68	1590.09	1610.21	1724.46
Gualaca	140.19	141.21	140.49	137.17	136.86	138.87	134.80	138.29	136.34	137.89	137.42	152.99	153.56	156.18	161.08
Las Cruces	39.88	42.75	41.45	41.40	41.81	41.38	40.41	39.49	40.36	41.06	40.61	44.20	44.95	46.97	45.89
Los Valles	321.75	311.81	304.69	302.01	306.25	307.09	303.53	305.95	303.04	304.37	299.98	304.42	301.74	302.97	306.98
La Herradura	0.00	0.00	0.00	0.00	0.00	22.25	21.80	21.70	21.96	22.49	21.49	22.00	24.68	24.94	24.99
La Huaca	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
La Potra (Bajo Frio)	86.25	84.25	80.65	79.88	80.93	82.63	78.94	79.08	81.83	84.61	78.99	124.73	125.87	125.89	126.79
Las Cruces	5.53	5.56	5.61	5.62	5.51	5.47	5.76	5.76	5.75	5.83	5.86	6.17	6.15	6.17	6.18
Lorena	180.09	181.46	180.49	176.05	175.64	178.32	172.87	177.54	174.94	177.02	176.38	204.13	205.04	208.43	214.94
La Potra G4 (Bajo Frio)	1.34	1.67	1.36	1.33	1.54	1.51	1.39	1.30	1.43	1.70	1.24	3.66	3.50	3.74	3.59
Monte Lirio	261.46	254.62	254.27	248.81	250.07	255.48	250.43	247.52	254.53	255.79	243.55	300.08	302.41	299.07	301.96
Macho Monte	16.93	15.14	13.94	13.31	12.83	12.64	12.78	12.94	12.82	12.95	13.26	13.50	12.70	12.69	12.55
Macano	1.19	1.19	0.99	1.15	1.08	1.14	1.11	1.15	1.12	1.08	1.10	2.47	2.40	2.47	2.54
Mendre II	43.82	44.33	43.91	43.09	43.07	43.38	42.32	43.04	43.19	42.91	41.96	51.79	52.03	51.85	52.49
Mendre	130.83	132.19	131.07	128.90	128.84	129.67	126.84	128.75	129.16	128.42	125.88	138.08	138.73	138.23	139.96
Mini Chan	68.17	68.79	68.79	68.79	68.79	68.79	68.79	68.79	68.79	68.79	68.79	68.79	68.79	68.79	68.79
Ojo de Agua	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paso Ancho	33.29	33.62	33.48	32.92	32.97	33.34	33.22	32.98	33.60	33.53	32.15	36.17	35.19	34.78	35.47
Pando	0.00	171.91	171.19	168.33	168.79	171.71	169.84	167.21	172.18	173.44	164.88	195.41	194.23	193.78	195.92
Pedregalito II	12.88	13.13	10.95	11.98	11.21	12.57	11.48	12.63	11.70	11.18	12.11	37.53	35.71	37.70	38.35
Pedregalito I	27.95	28.22	24.53	26.57	24.74	27.44	25.46	27.65	25.64	24.90	26.39	59.72	56.81	59.98	61.02
Las Perlas Norte	18.89	18.76	16.78	18.15	16.73	18.31	17.17	18.60	17.48	16.76	17.34	35.54	33.99	36.00	36.43
Las Perlas Sur	14.29	14.19	12.39	13.51	12.39	13.74	12.69	13.92	13.08	12.33	12.92	35.54	33.99	36.00	36.43
Los Planetas 2	50.83	51.68	50.62	50.42	50.58	50.87	50.52	50.58	50.34	50.34	50.23	60.27	60.47	60.55	60.43
Los Planetas I	22.38	22.83	22.45	22.32	22.36	22.41	22.49	22.27	22.31	22.31	22.34	27.41	27.46	27.49	27.48
Prudencia	272.10	275.33	272.53	265.35	265.26	269.40	260.48	267.42	264.42	266.85	265.15	311.82	313.65	318.29	328.17
RP-490	9.71	9.66	8.57	9.37	8.67	9.35	8.80	9.54	8.88	8.57	9.08	18.81	17.89	18.87	19.34
Río Piedra	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Andres	0.00	42.50	41.64	41.23	41.44	42.36	41.23	41.17	41.88	42.53	41.16	45.56	45.62	46.33	46.81
Salsipuedes (Bajo Frio)	75.29	73.17	69.65	69.10	70.20	71.82	68.13	68.40	70.91	73.61	68.21	122.46	123.73	123.64	124.63
San Andrés II	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
San Bartolo Minicentral	0.00	0.00	0.00	0.00	0.00	0.00	6.82	6.90	6.77	6.87	6.90	6.77	6.81	6.75	6.79
San Bartolo	0.00	0.00	0.00	0.00	0.00	0.00	41.33	39.33	37.91	40.11	38.34	40.80	47.13	50.96	47.89
El Sindigo	0.00	0.00	0.00	0.00	58.56	59.25	58.74	57.63	59.03	58.84	58.05	63.31	63.88	64.01	64.58
San Lorenzo	45.17	46.00	43.98	44.45	45.05	44.86	43.14	44.00	44.11	45.08	44.23	48.49	48.24	49.90	49.01
Santa Maria 82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tizingal	0.00	0.00	0.00	0.00	5.66	5.68	5.39	5.74	5.72	5.95	5.37	9.81	9.38	9.78	9.77
La Yeguada	26.94	27.55	26.89	27.39	27.28	27.59	27.05	26.49	27.09	27.72	26.81	26.88	26.90	27.56	27.40
Bunker C (No. 6 fuel oil)	240.08	167.06	129.99	9.18	2.78	1.98	4.28	16.83	15.88	15.24	19.43	0.28	0.00	0.17	2.22
Carbón (bituminoso)	332.20	241.39	235.93	22.55	13.30	23.44	32.78	87.00	72.41	105.58	118.35	3.07	2.24	10.59	13.88
Gas Natural	2396.96	2127.47	1978.86	3079.99	2549.33	2759.91	3138.56	3585.55	3749.21	4170.44	4230.93	5280.75	5353.66	5784.66	6413.74
Diesel (No. 2 fuel oil)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar	336.95	368.50	573.02	796.65	976.56	1,076.88	1,141.45	1,266.44	1,360.96	1,445.30	1,442.96	1,444.84	1,440.61	1,430.35	1,443.48
Eólico	595.59	766.91	765.18	772.77	958.24	1,027.31	1,093.53	1,084.02	1,098.01	1,151.22	1,535.95	1,747.56	2,023.87	2,274.16	2,298.13
Gas Metano (Lixiviado de re	65.70	63.46	63.72	64.41	59.49	61.19	63.77	64.73	65.76	66.47	67.47	65.96	66.08	66.39	67.09
Oferta ACP	24.34	55.24	66.20	17.32	18.09	36.14	54.61	37.87	3.21	0.66	0.33	10.39	37.72	3.10	3.13
Minera Panamá, S.A.	1,853.84	1,957.86	1,918.51	1,949.30	1,948.72	1,959.84	1,963.18	1,964.84	1,965.56	1,965.79	1,966.00	1,962.81	1,962.48	1,963.09	1,963.89
Total Hidro	6,719.98	7,916.89	7,836.46	7,701.22	7,840.06	7,989.51	7,918.47	8,060.45	7,972.41	8,133.89	8,086.62	8,875.54	8,931.11	9,039.08	9,228.88
Total Termico	2,969.24	2,535.92	2,344.78	3,111.72	2,565.41	2,785.34	3,175.62	3,689.38	3,837.50	4,291.25	4,368.71	5,284.10	5,355.90	5,795.42	6,429.84
Total Ren no Conv	998.24	1,198.87	1,401.92	1,633.82	1,994.29	2,165.38	2,298.75	2,415.19	2,524.74	2,662.98	3,046.37	3,258.35	3,530.57	3,770.90	3,808.70
Oferta ACP	24.34	55.24	66.20	17.32	18.09	36.14	54.61	37.87	3.21	0.66	0.33	10.39	37.72	3.10	3.13
Minera Panamá, S.A.	1,853.84	1,957.86	1,918.51	1,949.30	1,948.72	1,959.84	1,963.18	1,964.84	1,965.56	1,965.79	1,966.00	1,962.81	1,962.48	1,963.09	1,963.89
Total Gen	**12,565.63**	**13,664.77**	**13,567.87**	**14,413.38**	**14,366.57**	**14,936.21**	**15,410.63**	**16,167.73**	**16,303.41**	**17,054.58**	**17,468.03**	**19,391.19**	**19,817.78**	**20,571.60**	**21,434.45**
Exportaciones	176.19	326.18	234.46	572.85	489.20	540.28	548.67	712.75	493.43	633.84	612.33	1,341.21	1,269.44	1,362.48	1,480.94
Importaciones	24.79	98.52	469.64	437.82	866.67	818.29	842.02	744.06	909.15	828.51	947.65	303.56	421.08	392.47	300.07
Demanda	**12,413.37**	**13,434.20**	**13,789.00**	**14,265.20**	**14,718.00**	**15,189.70**	**15,678.70**	**16,176.70**	**16,691.90**	**17,224.40**	**17,775.10**	**18,344.20**	**18,956.90**	**19,589.70**	**20,244.60**
Deficit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perdidas	0.86	2.92	14.04	13.15	26.04	24.52	25.28	22.34	27.23	24.85	28.25	9.34	12.51	11.89	8.98