Plan de Expansión del Sistema Interconectado Nacional
2018 – 2032

Tomo II
Plan Indicativo de Generación

Tomo II - Anexo 3

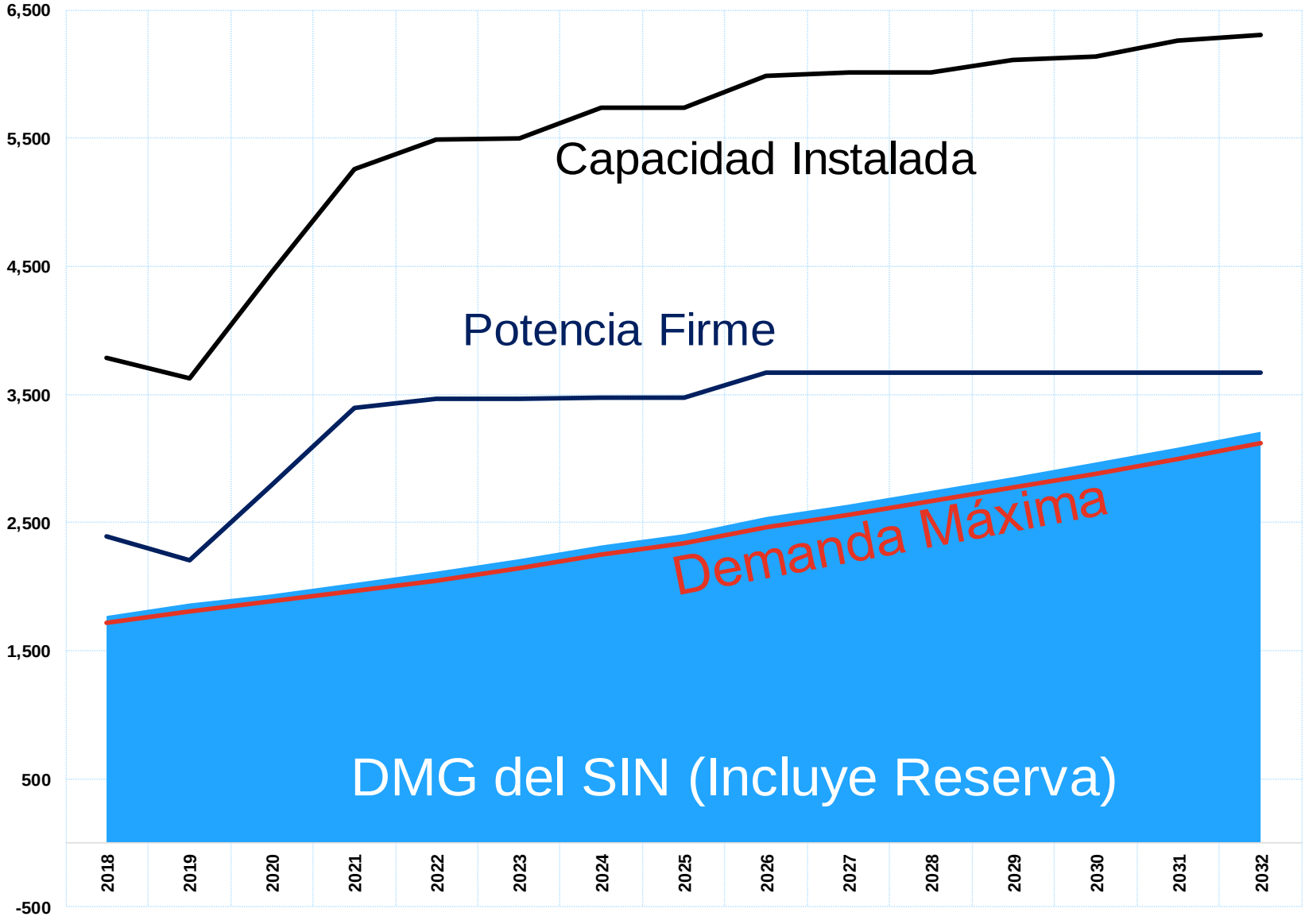
Salidas del Escenario Alternativo II:

Escenario renovable-térmico considerando:

- Proyectos renovables que incluyen hidroeléctricos, eólicos y solares con licencia o concesión definitiva o en trámite.
- Proyectos térmicos que incluyen los combustibles convencionales (bunker y diésel) y gas natural (incluyendo las facilidades de regasificación) con licencia definitiva o en trámite.
- Un escenario con características de alta demanda,
- Un escenario de precios altos de combustible como punto de partida en el año 2018 para aplicar la tendencia alta de combustibles líquidos ("High Price"), tendencia alta la proyección del Henry Hub y tendencia alta ("High Price") del carbón, estimada por la versión del "Annual Energy Outlook 2018".. de la EIA/DOE

ETESA
Empresa de Transmisión Eléctrica, S.A.

Gráfico N° A3.1 Balance de Potencia vs Demanda del Alternativo II



Cuadro N° A3.1 Capacidad Firme Escenario Alternativo II

Agente Generador	Nombre	Capacidad Instalada (MW)	Potencia EEectiva (MW)	Potencia Eirme (MW)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
AES Changuinola, S.A.	Changuinola I	212.4	209.68	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	9.76	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.	La Estrella	47.2	46.3	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	54.3	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.	Bayano	260	259.97	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.	Está	120	119.98	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	37.6	33.67	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	62.02	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	25.6	25.6	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	3.9243	3.9243	3.9243	3.9243	3.9243	3.9243	3.9243	3.9243	3.9243	3.9243	3.9243	3.9243	3.9243	3.9243	3.9243	3.9243
Corporación de Energía del Istmo Ltd.	Las Cruces	19.47	18.66	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	7.8	1.556	1.556	1.556	1.556	1.556	1.556	1.556	1.556	1.556	1.556	1.556	1.556	1.556	1.556	1.556	1.556
Electron Investment	Monte Lirio	53.75	53.73	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 2	6.33	6.33	1.361	1.361	1.361	1.361	1.361	1.361	1.361	1.361	1.361	1.361	1.361	1.361	1.361	1.361	1.361	1.361
Empresa Nacional de Energia, S.A	Bugaba I	5.14	5.14	0.511	0.511	0.511	0.511	0.511	0.511	0.511	0.511	0.511	0.511	0.511	0.511	0.511	0.511	0.511	0.511
ENEL Fortuna, S.A.	Fortuna	300	300	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	3.13	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Energía y Servicios de Panamá, S.A. (ESEPSA)	La Yeguada	7	6.6	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Energía y Servicios de Panamá, S.A. (ESEPSA)	Macho Monte	2.496	2.4	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Fountain Intertrade Corp.	La Potra (Bajo Frio)	27.9	27.6	8.662	8.662	8.662	8.662	8.662	8.662	8.662	8.662	8.662	8.662	8.662	8.662	8.662	8.662	8.662	8.662
Fountain Intertrade Corp.	Salsipuedes (Bajo Frio)	27.9	27.68	8.662	8.662	8.662	8.662	8.662	8.662	8.662	8.662	8.662	8.662	8.662	8.662	8.662	8.662	8.662	8.662
Fountain Intertrade Corp.	La Potra G4 (Bajo Frio)	2.1	2.05	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Saltos de Francoli S.A.	Los Planetas 2	8.886	6.73	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
Generadora Alto Valle, S.A.	Cochea	15.5	15.49	3.064	3.064	3.064	3.064	3.064	3.064	3.064	3.064	3.064	3.064	3.064	3.064	3.064	3.064	3.064	3.064
Generadora del Istmo S.A.	Barro Blanco	26.8	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	19.9	2.043	2.043	2.043	2.043	2.043	2.043	2.043	2.043	2.043	2.043	2.043	2.043	2.043	2.043	2.043	2.043
Generadora Río Chico S.A.	Pedregalito II	13.488	12.52	0.376	0.376	0.376	0.376	0.376	0.376	0.376	0.376	0.376	0.376	0.376	0.376	0.376	0.376	0.376	0.376
Hidro Boquerón, S.A.	Macano	5.25	5.16	0.898	0.898	0.898	0.898	0.898	0.898	0.898	0.898	0.898	0.898	0.898	0.898	0.898	0.898	0.898	0.898
Hidro Piedra, S.A.	RP-490	14.3	14.3	3.372	3.372	3.372	3.372	3.372	3.372	3.372	3.372	3.372	3.372	3.372	3.372	3.372	3.372	3.372	3.372
Hidroecológica del Teribe, S.A	Bonyic	31.3095	30	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	4.2	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	8.7	8.26	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333
Hidroibérica, S.A.	El Fraile	6.71	6.71	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498	1.498
Hidro Piedra, S.A.	La Cuchilla	8.4	8.3	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
Hydro Caisán, S.A.	El Alto	75	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	56.8	56.8	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	85.9	85.9	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	0.6	0.6	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Ideal Panamá, S.A	Baitún G3	1.73	1.7	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Istmus Hydropower Corp	Concepción	11	10	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	10	2.461	2.461	2.461	2.461	2.461	2.461	2.461	2.461	2.461	2.461	2.461	2.461	2.461	2.461	2.461	2.461
Las Perlas Sur, S.A	Las Perlas Sur	10	10	2.461	2.461	2.461	2.461	2.461	2.461	2.461	2.461	2.461	2.461	2.461	2.461	2.461	2.461	2.461	2.461
Paso Ancho Hydro-Power, Corp.	Paso Ancho	6.16	6.16	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	4.818	4.74	1.102	1.102	1.102	1.102	1.102	1.102	1.102	1.102	1.102	1.102	1.102	1.102	1.102	1.102	1.102	1.102
Total Hidroeléctrico		1755	1755	1083	1083	908	1083	1083	1083	1083	1083	1083	1083	1083	1083	1083	1083	1083	1083

Cuadro N° A3.1 Capacidad Firme Escenario Alternativo II (Continuación)

Agente Generador	Nombre	Capacidad Instalada (MW)	Potencia EEectiva (MW)	Potencia Eirme (MW)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
AES Panamá, S.A.	Estrella del Mar (Barcaza)	72.002	71.202	64.51	64.51	64.51	64.51	64.51	64.51	64.51	64.51	64.51	64.51	64.51	64.51	64.51	64.51	64.51	64.51
Alternegy, S.A.	Cativa	87	83.5	62.67	62.67	62.67	62.67	62.67	62.67	62.67	62.67	62.67	62.67	62.67	62.67	62.67	62.67	62.67	62.67
Autoridad del Canal de Panamá	Miraflores G2	10	9.7	9.05	9.05	9.05	9.05	9.05	9.05	9.05	9.05	9.05	9.05	9.05	9.05	9.05	9.05	9.05	9.05
Autoridad del Canal de Panamá	Miraflores G5	18	17.55	13.77	13.77	13.77	13.77	13.77	13.77	13.77	13.77	13.77	13.77	13.77	13.77	13.77	13.77	13.77	13.77
Autoridad del Canal de Panamá	Miraflores G6*	*17.8	*17.06	*14.21	*14.21	*14.21	*14.21	*14.21	*14.21	*14.21	*14.21	*14.21	*14.21	*14.21	*14.21	*14.21	*14.21	*14.21	*14.21
Autoridad del Canal de Panamá	Miraflores G9	40.806	38.95	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75	35.75
Autoridad del Canal de Panamá	Miraflores G10	40.806	38.95	32.92	32.92	32.92	32.92	32.92	32.92	32.92	32.92	32.92	32.92	32.92	32.92	32.92	32.92	32.92	32.92
Autoridad del Canal de Panamá	Miraflores G8	17.8	17.06	13.49	13.49	13.49	13.49	13.49	13.49	13.49	13.49	13.49	13.49	13.49	13.49	13.49	13.49	13.49	13.49
Bahía Las Minas Corp.	J. Brown G5	33	33.22	0.00	0.00														
Bahía Las Minas Corp.	J. Brown G6	33	33.22	17.38	17.38														
Bahía Las Minas Corp.	BLM 8	34	33.38	19.27	19.27														
Bahía Las Minas Corp.	BLM Carbón	120*	110*	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
Bahía Las Minas Corp.	BLM Carbón (BLM 2)	36.67	36.67	15.11	15.11	15.11	15.11	15.11	15.11	15.11	15.11	15.11	15.11	15.11	15.11	15.11	15.11	15.11	15.11
Bahía Las Minas Corp.	BLM Carbón (BLM 3)	36.67	36.67	26.96	26.96	26.96	26.96	26.96	26.96	26.96	26.96	26.96	26.96	26.96	26.96	26.96	26.96	26.96	26.96
Bahía Las Minas Corp.	BLM Carbón (BLM 4)	36.67	36.67	30.65	30.65	30.65	30.65	30.65	30.65	30.65	30.65	30.65	30.65	30.65	30.65	30.65	30.65	30.65	30.65
Bahía Las Minas Corp.	BLM 9 Carbón	56.14	38.18	22.06	22.06	22.06	22.06	22.06	22.06	22.06	22.06	22.06	22.06	22.06	22.06	22.06	22.06	22.06	22.06
Energyst International B.V.	Cerro Azul MT XQC1600	39.56	39.33	39.33	39.33	39.33	39.33	39.33	39.33	39.33	39.33	39.33	39.33	39.33	39.33	39.33	39.33	39.33	39.33
Energyst International B.V.	Cerro Azul MT PM1360	4.92	4.92	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64	4.64
Generadora del Atlántico S.A.	Termo Colón G1	50	48.5	48.39	48.39	48.39	48.39	48.39	48.39	48.39	48.39	48.39	48.39	48.39	48.39	48.39	48.39	48.39	48.39
Generadora del Atlántico S.A.	Termo Colón G2	50	48.5	47.84	47.84	47.84	47.84	47.84	47.84	47.84	47.84	47.84	47.84	47.84	47.84	47.84	47.84	47.84	47.84
Generadora del Atlántico S.A.	Termo Colón Ciclo	150*	145.5*	145.5*	145.5*	145.5*	145.5*	145.5*	145.5*	145.5*	145.5*	145.5*	145.5*	145.5*	145.5*	145.5*	145.5*	145.5*	145.5*
Generadora del Atlántico S.A.	Termo Colón G3	50	48.5	43.99	43.99	43.99	43.99	43.99	43.99	43.99	43.99	43.99	43.99	43.99	43.99	43.99	43.99	43.99	43.99
Jinro Corporation	Jinro Power	57.834	55.05	53.25	53.25	53.25	53.25	53.25	53.25	53.25	53.25	53.25	53.25	53.25	53.25	53.25	53.25	53.25	53.25
Kanan Overseas 1, INC.	Barcaza La Esperanza	129.36	92	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	99.6	96	96.00	96.00	96.00	96.00	96.00	96.00	96.00	96.00	96.00	96.00	96.00	96.00	96.00	96.00	96.00	96.00
Pan Am Generating Ltd	Amp. Panam	49.8	48	48.00	48.00	48.00	48.00	48.00	48.00	48.00	48.00	48.00	48.00	48.00	48.00	48.00	48.00	48.00	48.00
Pedregal Power Company	Pacora	55.344	53.55	50.12	50.12	50.12	50.12	50.12	50.12	50.12	50.12	50.12	50.12	50.12	50.12	50.12	50.12	50.12	50.12
Urbalia Panamá, S.A.	Cerro Patacón	8.151	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75
Valley Rise Investment Corp.	El Giral	15.36	15.24	11.20	11.20	11.20	11.20	11.20	11.20	11.20	11.20	11.20	11.20	11.20	11.20	11.20	11.20	11.20	11.20
Valley Rise Investment Corp.	El Giral II	34.8	34.28	24.88	24.88	24.88	24.88	24.88	24.88	24.88	24.88	24.88	24.88	24.88	24.88	24.88	24.88	24.88	24.88
Total Termoeléctrico		**1197**	**1197**	**923**	**923**	**887**	**887**	**887**	**887**	**887**	**887**	**887**	**887**	**887**	**887**	**887**	**887**	**887**	**887**

Agente Generador	Nombre	Capacidad Instalada (MW)	Potencia EEectiva (MW)	Potencia Eirme (MW)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
UEP Penonomé I, S. A.	Nuevo Chagres	55	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
UEP Penonomé II, S. A.	Rosa de los Vientos Etapa I	52.5	52.5	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	17.5	17.5	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	32.5	32.5	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	62.5	62.5	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	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
Total Eólico		**270**	**270**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Agente Generador	Nombre	Capacidad Instalada (MW)	Potencia EEectiva (MW)	Potencia Eirme (MW)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Azucarera Nacional	Cocle Solar	0.96	0.94	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	9.9	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
Empresa de Generación Eléctrica, S.A.	Sarigua	2.4	2.4	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	2.4	2.4	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
Enel Green Power Panamá, S.A.	Fotovoltaica Chiriquí	9.87	9.87	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	3.84	3.84	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
Llano Sánchez Solar Powe One, S.A. (Enel Gree	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 Cuatro, S.A. (Enel Gr	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 Power Tres, S.A. (Enel Gree	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
Llano Sanchez Solar Power, S.A.	Don Félix	2	2	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	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
PSZ1, S.A.	El Espinal	8.5	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
Sol Real Istmo, S.A. (Enel Green Power Panamá,	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
Sol Real Uno , S.A. (Enel Green Power Panamá,	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
Solar Azuero Venture, S. de R.L.	Miraflores Los Ángeles	10.5	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 Coclé Venture, S. de R.L.	Miraflores Coclé	10.5	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 Panamá Venture, S. de R.L.	Miraflores París	10.5	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
Total Solar		**130**	**130**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total Renovable		**400**		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total Existente		**3352**		**2007**	**2007**	**1795**	**1970**	**1970**	**1970**	**1970**	**1970**	**1970**	**1970**	**1970**	**1970**	**1970**	**1970**	**1970**	**1970**

Cuadro N° A3.1 Capacidad Firme Escenario Alternativo II (Continuación)

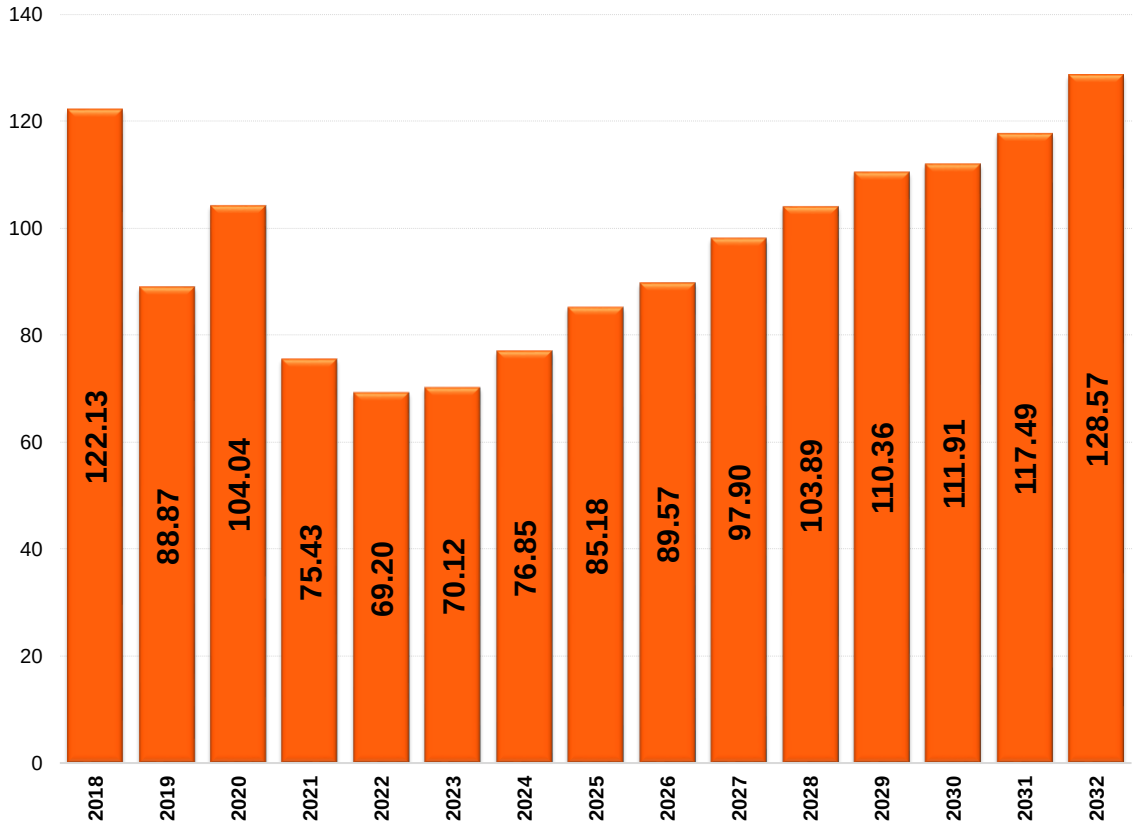
Proyectos Hidroeléctricos (Euturos)	Nombre	Capacidad Instalada (MW)	Potencia EEectiva (MW)	Potencia Eirme (MW)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Electron Investment	Pando	37	33.3	25.13		25.13	25.13	25.13	25.13	25.13	25.13	25.13	25.13	25.13	25.13	25.13	25.13	25.13	25.13
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	n/d	n/d	n/d
Desarrollos Hidroeléctricos Corp.	San Andres	9.8946	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
Navitas Internacional, S.A.	Chuspa	8.8	8.8	2.30			2.30	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 Barriles, S.A.	Colorado	6.74	6.74	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	1.94
Hidro Burica, S.A.	Burica	65.3	63	22.31					22.31	22.31	22.31	22.31	22.31	22.31	22.31	22.31	22.31	22.31	22.31
Hidroeléctrica Barriles, S.A.	Cotito	5	5	4.00					4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Hidroeléctrica Barriles, S.A.	Barriles	1	1	0.13					0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Empresa Nacional de Energia, S.A	La Herradura	5.477	5.2	1.03						1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Empresa Nacional de Energia, S.A	El Recodo	10.005	10	3.25						3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25
Corporación de Energía del Istmo Ltd.	San Bartolo	19.44	19.44	5.64							5.64	5.64	5.64	5.64	5.64	5.64	5.64	5.64	5.64
Corporación de Energía del Istmo Ltd.	San Bartolo Minicentral	1	1	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hidroecológica San Andrés, S.A.	San Andrés II	7.61	7.61	2.25								2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.25
Hidroeléctrica Tizingal S.A.	Tizingal	4.643	4.643	2.55								2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55
Bocas del Toro Energía, S.A.	Bocas del Toro (Changuinola II)	214.76	210.94	180.89									180.89	180.89	180.89	180.89	180.89	180.89	180.89
Bocas del Toro Energía, S.A.	Bocas del Toro Minicentral (Changuinola II)	13.7	12.95	12.95									12.95	12.95	12.95	12.95	12.95	12.95	12.95
		412	400	267	0	28	32	32	58	63	68	73	267	267	267	267	267	267	267

Proyectos Termoeléctricos (Euturos)	Nombre	Capacidad Instalada (MW)	Potencia EEectiva (MW)	Potencia Eirme (MW)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Gas Natural Atlantico S de R.L.	Costa Norte I	381	381	381.00	381.00	381.00	381.00	381.00	381.00	381.00	381.00	381.00	381.00	381.00	381.00	381.00	381.00	381.00	381.00
Minera Panamá, S.A.	Cobre Panamá - PACO Power Plant	300*	274*	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
Martano Inc.	Gas To Power Panamá GTPP	458.1	424.7	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	412.29
Panamá NG Power, S.A	Telfers	670	656.16	603.00				603.00	603.00	603.00	603.00	603.00	603.00	603.00	603.00	603.00	603.00	603.00	603.00
Consoricio ENERGYST Panama International	Energyst El Sánchez	44.33	44.33	37.68					37.68	37.68	37.68	37.68	37.68	37.68	37.68	37.68	37.68	37.68	37.68
		1553	1506	1434	381	381	793	1396	1434	1434	1434	1434	1434	1434	1434	1434	1434	1434	1434

Proyectos Solares (Euturos)	Nombre	Capacidad Instalada (MW)	Potencia EEectiva (MW)	Potencia Eirme (MW)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
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
Sol Real Uno , S.A. (Enel Green Power Panamá,	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	10	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	10	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	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	0.00	0.00	0.00	0.00
Tecnisol II, S.A.	IKAKO I	10	10	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	10	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 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	0.00	0.00
	Solar Zona Chiriquí 01	10	10	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
Providencia Solar 1, S.A.	Providencia Solar 1, S.A.	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	0.00
Generadora de Energía Renovable, S.A	Campo Solar La Victoria	10	10	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	7.08	7.08	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
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	0.00
Green Electric, S.A.	La Mata	10	10	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	60	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
Celsolar, S.A.	Celsia Solar Gualaca	17.3	17.3	0.00				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Celsolar, S.A.	Celsia Solar Prudencia	21.42	21.42	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
Panasolar Generation, S.A.	Panasolar Generation	9.9	9.9	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	60	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 Zona Herrera 01	8	8	0.00								0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Solar Zona Chiriquí 09	19.89	19.89	0.00											0.00	0.00	0.00	0.00	0.00
	Solar Zona Chiriquí 20	71	71	0.00											0.00	0.00	0.00	0.00	0.00
	Solar Zona Coclé 13	9.9	9.9	0.00											0.00	0.00	0.00	0.00	0.00
	Solar Zona Coclé 25	30	30	0.00													0.00	0.00	0.00
	Solar Zona Chiriquí 19	52	52	0.00													0.00	0.00	0.00
	Solar Zona Chiriquí 18	46	46	0.00													0.00	0.00	0.00
	Solar Zona Coclé 24	10	10	0.00														0.00	0.00
	Solar Zona Chiriquí 16	19.8	19.8	0.00														0.00	0.00
	Solar Zona Coclé 10	10	10	0.00														0.00	0.00
		579	579	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Proyectos Eólicos (Euturos) MW	Nombre	Capacidad Instalada (MW)	Potencia EEectiva (MW)	Potencia Eirme (MW)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
UEP Penonomé II, S. A.	Penonome III	69	69	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
Parque Eólico Toabré, S.A.	Toabré Etapa 1	60	60	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
Helium Energy Panamá	Viento Sur	115.2	115.2	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 Veraguas 02	111.6	111.6	0.00							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Eólico Zona Veraguas 04	108	108	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	22	0.00										0.00	0.00	0.00	0.00	0.00	0.00
	Eólico Zona Coclé 01	22	22	0.00													0.00	0.00	0.00
		508	508	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CUADRO N° A3.2: Costos Marginales del Escenario Alternativo II



Costo Marginal de Demanda $/MWh													
Año	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic	Prom
2018	235.91	246.87	215.59	217.92	102.36	81.97	77.28	69.23	56.69	53.76	50.98	57.06	122.13
2019	101.54	104.15	113.60	126.92	100.54	83.57	79.95	76.76	70.04	68.68	66.72	73.99	88.87
2020	116.28	126.48	138.89	149.45	119.68	104.67	102.28	90.03	80.69	76.14	67.20	76.69	104.04
2021	96.45	99.32	97.95	101.56	92.33	84.78	71.02	61.38	55.06	44.30	44.67	56.34	75.43
2022	79.20	85.10	83.24	84.63	81.28	76.13	70.60	64.19	55.92	46.51	44.79	58.84	69.20
2023	78.03	87.30	85.45	86.31	86.27	78.92	75.57	64.86	59.13	47.76	36.61	55.17	70.12
2024	83.96	96.25	90.93	92.12	90.77	84.18	82.33	74.05	65.95	57.03	44.13	60.52	76.85
2025	93.02	99.82	95.18	100.07	97.56	90.95	89.84	83.39	75.07	67.10	54.85	75.27	85.18
2026	93.57	102.34	100.76	107.33	101.58	93.79	92.57	85.98	78.41	72.54	66.36	79.66	89.57
2027	105.03	108.47	110.15	112.66	105.30	100.27	99.84	95.91	88.55	79.71	78.22	90.63	97.90
2028	110.30	114.20	115.05	121.98	109.62	104.44	103.98	101.81	94.08	89.02	84.49	97.67	103.89
2029	116.86	118.99	125.87	135.85	116.12	107.08	107.81	106.07	98.83	96.69	91.93	102.26	110.36
2030	118.21	120.99	125.65	135.83	120.38	108.56	108.47	108.19	99.77	97.87	95.83	103.19	111.91
2031	125.37	126.80	127.88	147.20	133.33	113.88	113.10	112.58	102.63	100.79	100.17	106.19	117.49
2032	133.77	132.54	143.50	172.79	147.46	125.75	124.41	119.29	110.92	109.22	109.47	113.77	128.57

CUADRO N° A3.3: Informe Final de Generación del Escenario Alternativo II

Informe Final de Generación															
Planta	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
6-Algarrob-H	49.69	47.61	46.69	46.59	46.55	47.29	46.73	46.65	48.17	47.88	48.18	46.82	54.73	54.73	54.76
6-B_MinaG3-H	3.39	3.50	3.45	3.44	3.48	3.47	3.47	3.44	3.45	3.48	3.48	3.52	3.50	3.52	3.53
6-B_Toro-H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	975.63	950.76	968.27	966.35	1,060.83	1,050.83	1,079.23
6-B_Totuma-H	30.59	29.20	29.47	29.33	28.93	29.35	29.38	29.68	29.13	29.71	29.82	29.42	32.39	32.48	32.66
6-BaitunG3-H	12.16	12.28	12.22	12.14	12.21	12.25	12.20	12.19	12.19	12.20	12.24	12.25	12.28	12.33	12.26
6-Baitun-H	398.36	401.70	399.59	393.00	396.69	392.50	400.73	397.63	397.39	401.22	408.61	407.79	508.92	512.37	513.15
6-BajoMina-H	265.18	268.27	258.59	255.45	257.28	255.34	260.30	257.49	257.30	258.90	263.97	264.01	319.28	320.87	321.23
6-Barriles-H	0.00	0.00	0.00	0.00	0.46	0.69	0.69	0.69	0.70	0.69	0.70	0.71	0.70	0.79	0.79
6-Bayano-H	463.48	625.07	622.93	619.70	628.83	628.85	625.82	618.97	645.90	629.84	642.55	633.45	631.06	641.68	632.86
6-BBlancG3-H	15.47	15.00	15.25	15.24	15.25	15.25	15.25	15.25	15.24	15.25	15.24	15.24	15.25	15.25	15.25
6-BBlanco-H	121.81	120.91	118.30	119.81	118.81	117.78	119.00	117.43	120.22	118.26	121.15	119.04	131.71	131.90	132.46
6-Bonyic-H	155.53	158.34	156.20	155.17	156.18	156.19	154.44	156.32	159.79	155.42	158.29	154.55	173.54	172.81	171.81
6-BToroG3-H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	105.17	105.17	105.17	105.13	105.17	105.17	105.16
6-Bugaba-H	19.35	19.70	19.32	19.41	19.69	19.52	19.45	19.30	19.65	19.57	19.78	19.64	21.65	21.58	21.48
6-BugabaII-H	23.63	23.95	23.48	23.67	23.97	23.64	23.75	23.51	24.00	23.81	24.08	23.91	26.78	26.80	26.75
6-Burica-H	0.00	0.00	0.00	0.00	188.39	271.82	272.48	270.60	273.67	273.71	277.16	277.36	301.69	301.56	301.97
6-C_Blanca-H	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
6-ChanI-H	822.81	173.98	810.64	808.43	800.85	817.84	817.88	740.88	848.96	825.15	844.16	832.59	1019.15	1008.33	1027.65
6-Chuspa-H	0.00	0.00	44.88	45.10	44.75	44.60	44.46	44.51	45.28	46.55	47.24	46.49	50.07	50.12	50.35
6-Cochea-H	59.89	63.44	62.80	61.11	62.29	60.68	61.89	60.11	62.71	61.55	64.71	61.88	69.39	70.43	71.53
6-Colorado-H	0.00	0.00	4.51	29.39	29.35	29.31	29.38	29.28	29.69	29.54	30.05	29.66	29.92	32.84	32.58
6-Concepci-H	72.22	76.23	77.52	77.59	76.92	78.62	77.40	77.57	77.75	78.05	78.85	77.88	82.61	82.95	82.64
6-Cotito-H	0.00	0.00	0.00	0.00	19.09	19.58	19.67	19.56	19.87	19.76	20.16	19.89	20.03	24.58	24.37
6-Cuchilla-H	53.04	53.75	52.66	52.64	51.89	53.30	52.66	52.57	53.13	53.65	54.37	53.31	56.01	56.58	55.96
6-Dolega-H	22.66	23.63	23.54	23.22	23.15	23.46	23.33	23.20	23.21	23.25	23.56	23.41	23.98	24.15	24.17
6-ElAltoG4-H	0.00	8.35	8.33	8.34	8.31	8.37	8.38	8.33	8.35	8.33	8.35	8.35	8.35	8.37	8.38
6-ElAlto-H	232.70	236.63	233.38	231.22	226.84	227.94	235.31	234.38	234.00	234.07	241.51	238.06	296.45	302.04	305.94
6-ElFraile-H	26.27	27.50	26.95	27.54	28.27	26.88	26.63	26.53	27.54	27.60	27.76	26.99	29.71	29.88	30.50
6-ElRecodo-H	0.00	0.00	0.00	0.00	0.00	43.41	41.90	40.65	43.25	42.75	44.00	42.52	42.29	48.04	47.27
6-Esperanz-H	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
6-Está-H	746.95	796.62	780.88	784.20	776.24	782.59	786.99	775.04	785.77	788.84	797.85	788.41	843.68	846.34	850.34
6-Estrella-H	259.20	260.90	261.95	258.44	256.53	260.04	259.59	259.95	266.60	261.29	264.81	260.73	267.10	263.39	262.25
6-Fortuna-H	1,467.14	1,620.72	1,638.31	1,642.96	1,627.91	1,585.72	1,600.38	1,587.30	1,646.94	1,613.95	1,647.47	1,660.22	1,591.41	1,626.39	1,650.10
6-Gualaca-H	152.97	160.81	158.68	159.34	157.79	158.96	159.78	157.60	159.29	160.05	161.92	160.45	171.24	171.42	172.31
6-L_Cruces-H	48.95	48.68	48.12	47.85	48.84	47.38	47.69	47.26	47.86	48.89	48.95	48.89	53.47	53.47	54.43
6-L_Valles-H	301.33	322.89	320.62	318.79	316.51	319.61	318.15	317.44	323.57	322.00	324.54	321.49	322.98	322.46	318.52
6-LaHerrad-H	0.00	0.00	0.00	0.00	0.00	21.62	21.73	21.67	22.12	21.89	22.04	21.98	21.85	24.87	24.89
6-LaHuaca-H	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
6-LaPotra-H	121.01	121.98	118.73	116.64	117.60	116.54	118.93	118.37	118.09	119.47	121.38	120.93	155.54	156.71	157.00
6-LCruceG3-H	7.98	7.95	7.97	7.97	7.97	7.98	7.98	7.97	7.96	7.97	7.97	7.97	7.99	7.99	7.99
6-Lorena-H	228.06	238.58	231.47	232.49	230.47	231.92	231.95	230.30	231.81	232.67	234.29	233.29	246.47	246.11	246.16
6-LPotraG4-H	13.83	13.73	13.72	13.73	13.61	13.79	13.74	13.70	13.77	13.98	13.82	13.86	14.04	14.14	14.16
6-M_Lirio-H	248.04	253.91	253.27	250.98	248.75	250.23	255.44	255.96	253.13	255.98	259.43	257.59	307.56	308.68	310.21
6-M_Monte-H	15.37	15.62	15.20	15.03	15.00	15.23	14.86	14.95	15.10	14.94	15.35	14.93	15.11	15.20	15.15
6-Macano-H	12.49	13.78	14.52	14.56	14.08	13.65	13.60	14.28	14.17	14.41	14.62	14.08	15.72	16.23	16.23
6-Mendre2-H	57.19	58.98	57.64	57.89	56.97	58.22	57.62	57.52	57.74	57.95	57.83	57.79	60.74	60.86	60.93
6-Mendre-H	113.68	116.26	114.25	115.35	112.81	115.98	116.30	113.23	116.20	116.04	117.61	114.75	126.28	126.41	125.33
6-MiniChan-H	67.86	68.13	68.13	68.13	68.13	68.13	68.13	68.11	68.13	68.13	68.13	68.13	68.13	68.13	68.13
6-OjoAgua-H	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
6-P_Ancho-H	26.73	28.10	28.24	27.82	27.53	27.92	28.28	28.43	28.09	28.54	28.31	28.51	29.86	30.19	30.09
6-Pando-H	0.00	169.80	169.11	167.34	163.84	166.13	169.90	172.27	169.14	171.76	173.49	171.26	195.62	198.49	199.96
6-Pedrega2-H	70.50	62.18	64.11	63.60	62.97	62.75	61.98	62.59	63.92	64.62	65.68	64.05	78.42	79.27	78.33
6-Pedregal-H	96.74	89.17	92.26	90.97	90.75	90.90	90.23	90.62	91.75	92.19	93.39	91.72	105.18	106.47	105.31
6-Perlas_N-H	62.26	62.34	64.62	64.33	64.38	64.90	64.53	64.93	64.74	64.82	65.13	64.96	66.53	66.54	66.62
6-Perlas_S-H	78.32	77.67	79.25	79.06	79.20	79.60	79.19	79.60	79.40	79.47	79.70	79.63	81.13	81.16	81.21
6-Planeta2-H	61.42	59.00	59.47	59.42	59.19	59.71	58.99	58.23	58.82	59.23	59.82	59.62	65.34	65.71	65.88
6-Planetas-H	33.56	32.97	32.66	32.59	32.51	32.65	32.36	32.03	32.24	32.48	32.75	32.74	34.73	34.81	34.89
6-Prudenci-H	339.64	357.64	348.11	349.13	347.01	348.86	349.01	347.09	348.69	349.91	353.07	351.61	376.02	375.72	376.63
6-RP-490-H	75.87	81.65	81.69	81.57	80.29	82.05	79.86	80.22	80.82	82.67	83.38	80.74	88.48	90.05	89.09
6-RPiedraC-H	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
6-S_Andres-H	0.00	0.00	42.48	41.93	41.95	41.60	42.27	41.91	42.42	42.70	43.04	42.64	46.49	47.46	48.01
6-Salsipue-H	116.64	117.27	109.51	107.30	108.02	107.12	108.89	108.39	108.28	110.37	111.69	111.75	148.31	148.89	148.55
6-SAndres2-H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	40.31	40.61	40.97	41.24	41.36	41.28	44.46	44.49
6-SBartG3-H	0.00	0.00	0.00	0.00	0.00	0.00	8.03	8.03	8.01	8.03	8.00	8.03	8.03	8.04	8.03
6-SBartolo-H	0.00	0.00	0.00	0.00	0.00	0.00	68.45	67.85	69.43	67.40	68.96	67.53	68.01	74.55	77.23
6-Sindigo-H	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
6-SLorenzo-H	39.88	40.96	40.36	40.82	41.03	40.88	40.44	40.66	40.58	41.14	41.65	41.07	44.87	45.21	45.49
6-StaMa82-H	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
6-Tizingal-H	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.65	5.69	5.83	5.81	5.37	9.91	10.23	9.78
6-Yeguada-H	20.31	21.78	22.19	21.81	22.02	22.10	22.08	21.80	22.02	21.72	22.33	21.81	21.97	22.04	22.25
Diesel (No. 2 fuel oil)	159.75	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bunker C (No. 6 fuel oil)	1408.36	180.86	266.10	11.64	0.81	0.29	1.21	3.19	5.69	8.12	12.89	29.84	21.09	30.79	81.58
Carbón (bituminoso)	348.60	367.16	387.85	314.20	316.06	316.94	342.80	368.18	378.15	391.08	396.19	399.29	399.67	400.04	401.91
Gas Natural	400.04	1881.11	2307.50	3380.39	4247.68	4488.69	5114.38	5717.42	5649.54	6389.56	6954.89	7519.43	7685.30	8135.63	8981.42
Solar	81.71	97.94	124.12	214.60	228.03	230.55	219.63	225.66	229.08	223.16	303.20	310.92	374.86	387.32	380.43
Eólico	201.14	239.25	240.40	290.46	379.24	391.67	514.77	554.64	550.41	576.75	603.40	616.68	558.82	554.15	593.15
Metano	66.39	66.65	66.48	61.06	60.29	58.78	60.45	63.14	64.18	65.89	66.78	67.14	67.20	67.28	67.60
Oferta ACP	161.39	105.84	166.29	85.97	18.25	18.90	37.64	58.00	42.22	7.10	5.93	9.54	19.72	53.23	29.83
Minera Panamá, S.A.	503.19	1,193.21	394.02	334.87	332.18	326.64	347.33	373.21	387.58	403.04	410.66	415.48	417.67	420.31	422.84
Total Hidro	7,732.17	7,709.12	8,388.21	8,389.56	8,558.34	8,702.67	8,819.95	8,738.00	10,064.20	9,978.40	10,138.84	10,070.10	10,926.90	11,001.08	11,072.67
Total Termico	2,316.75	2,429.13	2,961.90	3,706.23	4,564.55	4,805.92	5,458.38	6,088.79	6,033.38	6,788.75	7,363.97	7,948.55	8,106.06	8,566.46	9,464.91
Total Ren no Conv	349.24	403.83	431.00	566.13	667.56	681.00	794.85	843.44	843.67	865.80	973.38	994.74	1,000.88	1,008.74	1,041.18
Oferta ACP	161.39	105.84	166.29	85.97	18.25	18.90	37.64	58.00	42.22	7.10	5.93	9.54	19.72	53.23	29.83
Minera Panamá, S.A.	503.19	1,193.21	394.02	334.87	332.18	326.64	347.33	373.21	387.58	403.04	410.66	415.48	417.67	420.31	422.84
Total Gen	**11,062.74**	**11,841.14**	**12,341.41**	**13,082.75**	**14,140.88**	**14,535.13**	**15,458.15**	**16,101.44**	**17,371.06**	**18,043.08**	**18,892.78**	**19,438.41**	**20,471.24**	**21,049.82**	**22,031.43**
Exportaciones	52.46	153.18	173.94	497.44	952.99	955.28	1,092.70	1,056.30	1,306.00	1,266.60	1,303.50	1,144.80	1,265.00	1,133.20	1,144.70
Importaciones	153.54	24.05	118.40	296.73	284.77	588.13	529.40	531.88	386.89	398.83	363.33	422.03	348.30	465.38	424.72
Demanda	**11,159.22**	**11,711.34**	**12,282.26**	**12,873.01**	**13,464.21**	**14,150.11**	**14,878.71**	**15,561.01**	**16,440.21**	**17,163.31**	**17,941.71**	**18,702.91**	**19,543.81**	**20,367.91**	**21,298.81**
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	4.60	0.67	3.61	9.03	8.45	17.87	16.14	16.01	11.73	12.00	10.90	12.73	10.73	14.09	12.64