

Plan de Expansión del Sistema Interconectado  
Nacional  
2018 – 2032

Tomo II  
Plan Indicativo de Generación

**Tomo II - Anexo 2**

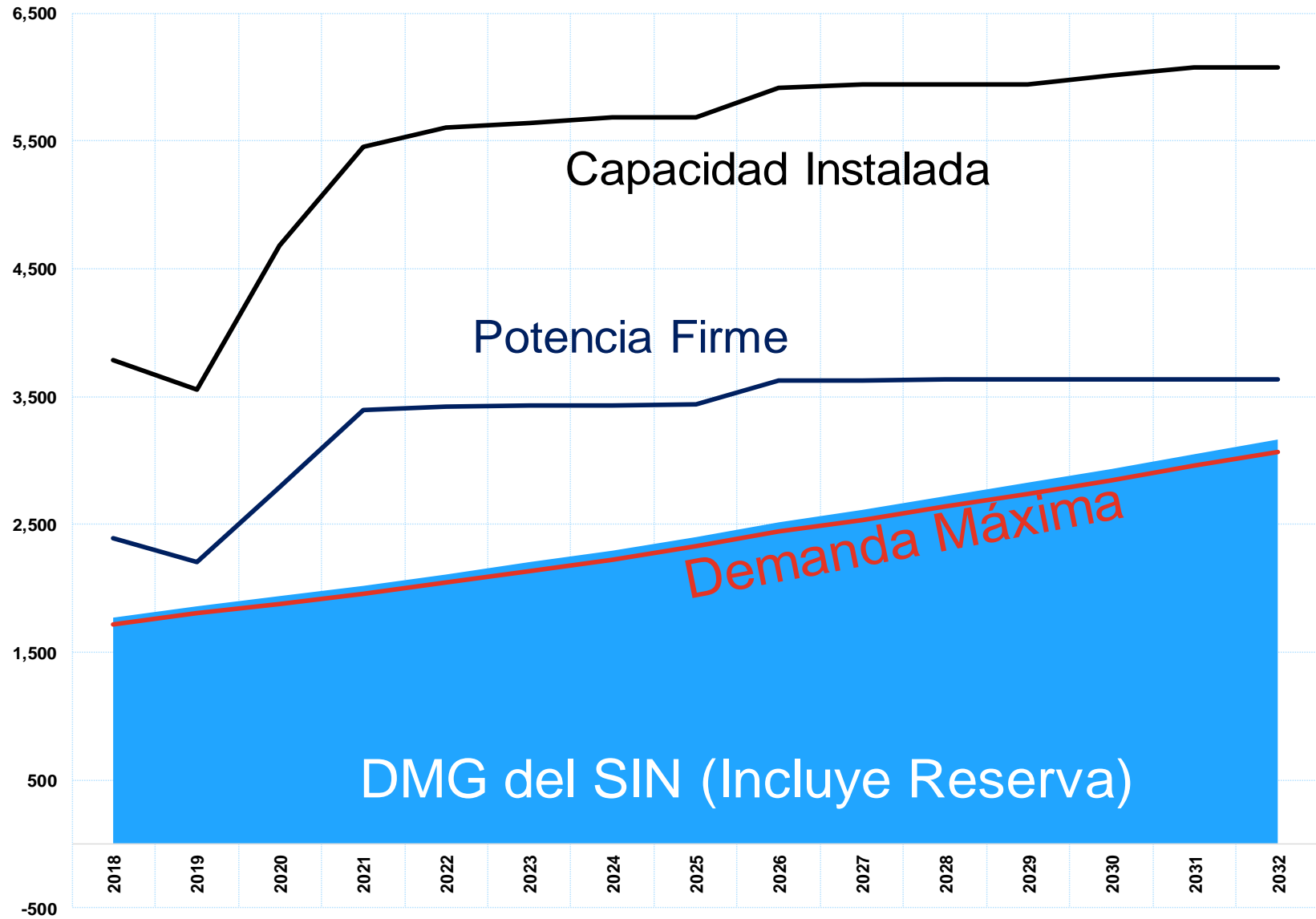
**Salidas del Escenario Alternativo I:**

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.
- Considerando la mayor cantidad de recursos renovables disponibles en el país.



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)	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.	Estí	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 Energía, 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 Energía, 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
Salto 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
Salto 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
<b>Total Hidroeléctrico</b>		<b>1755</b>	<b>1755</b>	<b>1083</b>	<b>1083</b>	<b>908</b>	<b>1083</b>	<b>1083</b>	<b>1083</b>	<b>1083</b>	<b>1083</b>	<b>1083</b>	<b>1083</b>	<b>1083</b>	<b>1083</b>	<b>1083</b>	<b>1083</b>	<b>1083</b>	<b>1083</b>

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

Agente Generador	Nombre	Capacidad Instalada (MW)	Potencia Efectiva (MW)	Potencia Firme (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 QXC1600	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

<b>Total Termoelectrico</b>		<b>1197</b>	<b>1197</b>	<b>923</b>	<b>923</b>	<b>887</b>	<b>887</b>	<b>887</b>	<b>887</b>	<b>887</b>	<b>887</b>	<b>887</b>	<b>887</b>	<b>887</b>	<b>887</b>	<b>887</b>	<b>887</b>	<b>887</b>	<b>887</b>
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Agente Generador	Nombre	Capacidad Instalada (MW)	Potencia Efectiva (MW)	Potencia Firme (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

<b>Total Eólico</b>		<b>270</b>	<b>270</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
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Agente Generador	Nombre	Capacidad Instalada (MW)	Potencia Efectiva (MW)	Potencia Firme (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 Energía, 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 Power One, S.A. (Enel Green Power)	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 Green Power)	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 Green Power)	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 Cocle Venture, S. de R.L.	Miraflores Cocle	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

<b>Total Solar</b>		<b>130</b>	<b>130</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total Renovable</b>		<b>400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

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

Proyectos Hidroeléctricos (Euturos)		Nombre	Capacidad Instalada (MW)	Potencia Efectiva (MW)	Potencia Firme (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 Energía, 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	1.03
Los Naranjos Overseas, S.A.	El Sindigo		10	10	1.28					1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28
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	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
Empresa Nacional de Energía, 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
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
Hidroeléctrica Tizingal S.A.	Tizingal		4.643	4.643	2.55										2.55	2.55	2.55	2.55	2.55	2.55
			414	403	266	0	28	32	32	58	61	66	70	263	263	266	266	266	266	266

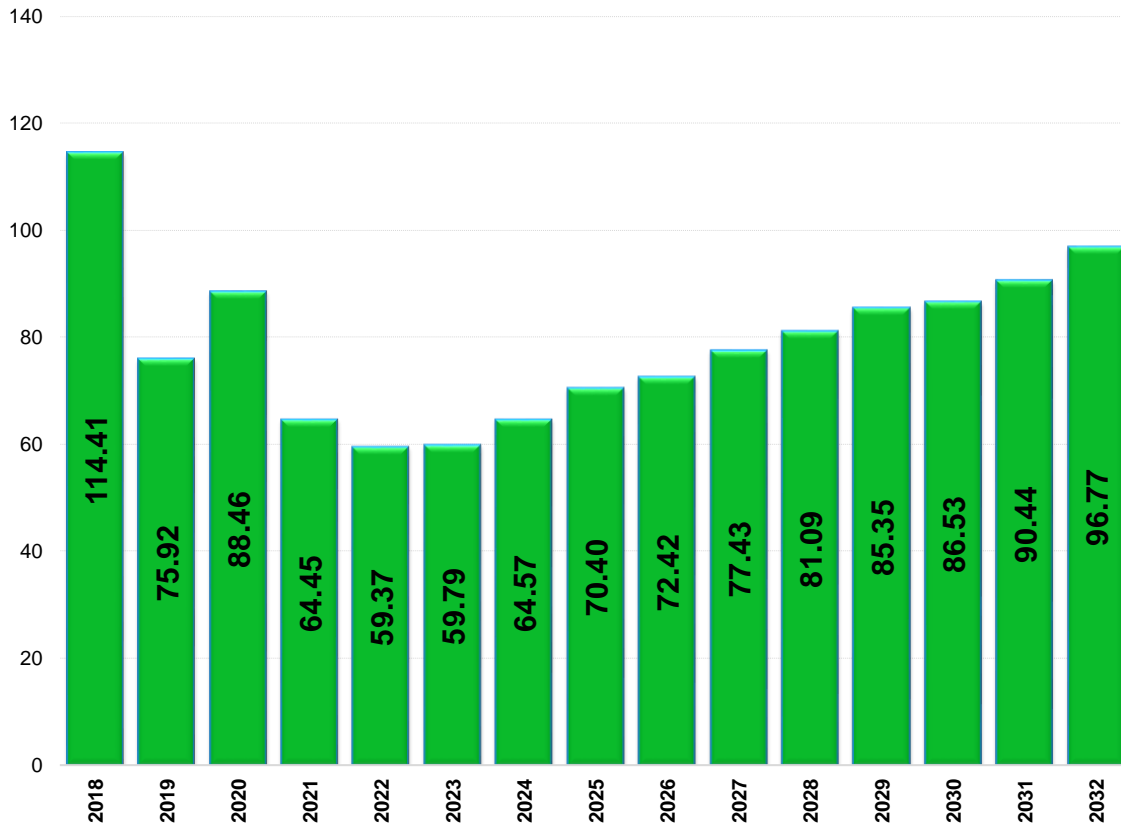
Proyectos Termoeléctricos (Euturos)		Nombre	Capacidad Instalada (MW)	Potencia Efectiva (MW)	Potencia Firme (MW)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Gas Natural Atlantico S de R.L.	Costa Norte I		381	381	381.00	381.00	381.00	381.00	381.00	381.00	381.00	381.00	381.00	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
			1553	1553	1434	381	381	793	1396	1396	1396	1396	1396	1396	1396	1396	1396	1396	1396	1396

Proyectos Solares (Euturos)		Nombre	Capacidad Instalada (MW)	Potencia Efectiva (MW)	Potencia Firme (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, Tecnisol I, 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	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
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
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
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
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
	Solar Zona Panamá 02		4	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
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	0.00
Bajo Frío PV S.A.	Bajo Frío PV S.A.		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	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
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
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 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	0.00	0.00
	Solar Zona Chiriquí 19		52	52	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	0.00
	Solar Zona Coclé 04		9	9	0.00							0.00	0.00	0.00	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
	Solar Zona Coclé 09		5	5	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 23		5	5	0.00													0.00	0.00	0.00
			482	482	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 Efectiva (MW)	Potencia Firme (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
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	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	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
	Eólico Zona Chiriquí 01		19.8	19.8	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	22	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 05		22	22	0.00										0.00	0.00	0.00	0.00	0.00	0.00
			416	416	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

**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
2018	223.76	233.14	201.45	194.43	95.32	76.92	72.99	65.23	54.76	51.88	49.76	53.34	114.41
2019	86.53	87.65	93.83	103.44	83.44	72.07	69.49	67.47	61.54	60.38	59.70	65.54	75.92
2020	93.59	105.00	115.18	125.40	100.05	89.35	87.40	80.27	71.79	67.63	59.61	66.23	88.46
2021	80.47	85.13	83.67	86.46	80.74	73.51	60.25	52.29	47.04	37.78	37.05	49.03	64.45
2022	66.42	72.96	71.36	72.85	70.39	65.86	60.36	54.68	48.65	40.01	38.33	50.54	59.37
2023	64.98	73.44	72.82	74.26	73.83	67.27	64.44	54.96	51.06	41.48	31.40	47.60	59.79
2024	70.41	80.81	76.06	76.64	75.96	70.71	68.66	61.95	56.14	48.29	38.38	50.91	64.57
2025	77.40	82.76	78.52	82.33	80.14	74.87	74.07	68.61	62.34	55.79	45.58	62.42	70.40
2026	76.22	83.30	81.22	85.55	81.20	75.85	74.47	69.67	63.63	58.72	54.29	64.87	72.42
2027	84.41	86.80	86.48	87.72	83.37	79.31	78.77	75.54	70.15	63.39	62.12	71.08	77.43
2028	87.03	89.63	89.18	95.43	85.48	81.42	81.30	79.37	73.38	69.19	66.32	75.31	81.09
2029	91.09	92.76	97.27	102.63	89.28	82.91	83.62	82.02	76.82	74.80	71.38	79.62	85.35
2030	92.02	93.45	96.54	104.10	92.25	84.16	83.94	83.88	77.59	76.08	73.78	80.55	86.53
2031	96.72	97.79	99.28	112.59	99.96	87.58	87.09	87.13	79.66	78.04	77.35	82.11	90.44
2032	101.96	100.91	109.59	127.29	107.90	94.36	92.44	90.66	84.05	82.28	83.39	86.37	96.77

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

Planta	Informe Final de Generación														
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
6-Algarrob-H	49.38	47.66	46.60	46.40	46.35	47.22	46.65	46.63	48.16	47.83	48.19	46.80	54.73	54.72	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	981.88	947.12	969.82	961.58	1,061.25	1,052.98	1,076.98
6-B_Totuma-H	30.56	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	12.19	12.19	12.18	12.20	12.24	12.25	12.28	12.32	12.26
6-Baitun-H	398.35	401.74	399.53	392.92	396.72	392.62	401.02	398.14	397.51	401.42	408.67	407.86	509.00	512.40	513.19
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	463.00	624.43	624.35	622.45	622.92	625.24	623.47	616.63	646.48	631.70	642.89	632.68	628.67	640.23	632.00
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-Bugaball-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-Chanl-H	823.77	173.93	812.46	806.19	800.42	817.05	817.73	740.63	853.96	821.64	844.28	829.15	1019.13	1009.78	1025.65
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	59.87	63.50	62.81	60.95	62.27	60.67	61.91	60.12	62.77	61.53	64.72	61.89	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	72.25	76.26	77.50	77.56	76.85	78.56	77.37	77.58	77.79	78.04	78.87	77.87	82.60	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	23.53	23.20	23.14	23.45	23.32	23.19	23.21	23.24	23.56	23.42	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-ElFraille-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	0.00	0.00	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-Estí-H	748.09	796.93	782.09	780.60	774.70	781.72	787.06	775.30	786.84	786.70	797.24	788.20	841.77	847.37	849.26
6-Estrella-H	259.11	261.01	261.67	257.83	256.11	259.72	259.53	259.97	266.65	261.29	264.82	260.78	267.07	263.38	262.25
6-Fortuna-H	1,471.18	1,623.94	1,653.12	1,625.82	1,630.97	1,584.81	1,603.20	1,590.80	1,656.27	1,609.86	1,647.75	1,668.97	1,579.69	1,631.49	1,637.75
6-Gualaca-H	153.13	160.92	158.90	158.58	157.50	158.81	159.77	157.63	159.45	159.66	161.82	160.36	170.94	171.65	172.15
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	322.96	320.45	318.38	316.16	319.42	318.17	317.47	323.62	322.00	324.55	321.51	322.96	322.45	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	156.72	157.01
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	228.07	238.63	231.84	231.71	230.10	231.91	232.08	230.38	231.87	232.28	234.11	233.17	246.26	246.23	246.14
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	14.12	14.15
6-M_Lirio-H	248.04	253.91	253.27	250.98	248.75	250.23	255.45	255.96	253.14	255.94	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	57.18	58.97	57.63	57.88	56.96	58.22	57.63	57.50	57.74	57.95	57.84	57.81	60.75	60.86	60.91
6-Mendre-H	113.67	116.46	114.06	115.13	112.59	115.83	116.27	113.21	116.33	115.86	117.66	114.68	126.26	126.44	125.27
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	96.72	89.17	92.26	90.97	90.75	90.92	90.23	90.62	91.75	92.19	93.39	91.72	105.18	106.47	105.31
6-Perlas_NH	62.30	62.37	64.59	64.30	64.38	64.89	64.53	64.94	64.75	64.82	65.13	64.96	66.53	66.54	66.62
6-Perlas_SH	78.32	77.67	79.24	79.06	79.21	79.62	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	59.70	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	32.58	32.52	32.66	32.36	32.03	32.24	32.48	32.75	32.74	34.73	34.81	34.89
6-Prudenci-H	339.65	357.71	348.63	348.03	346.49	348.83	349.20	347.21	348.77	349.35	352.81	351.43	375.73	375.88	376.59
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	116.65	117.28	109.51	107.26	107.99	107.12	108.94	108.50	108.31	110.42	111.68	111.78	148.34	148.95	148.67
6-SAndres2-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-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	58.89	57.63	57.92	58.72	59.93	59.42	58.53	62.96	64.13	64.62
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	0.00	0.00	0.00	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	22.09	21.80	22.02	21.72	22.33	21.81	21.97	22.04	22.25
Diesel (No. 2 fuel oil)	159.83	0.00	0.36	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)	1409.53	211.79	257.03	15.21	1.67	0.94	1.54	4.45	6.64	8.41	16.50	38.72	28.51	45.65	98.