

**RESUMEN DE LOS PRINCIPALES INDICADORES DEL SUB-SECTOR ELECTRICIDAD  
SISTEMA INTERCONECTADO NACIONAL (S.I.N.) Y SISTEMAS AISLADOS - AÑO 2002**

Concepto / Meses	Unidad de Medida	Enero	Febrero	Marzo	Abril	Mayo	Junio	Julio	Agosto	Septiembre	Octubre	Noviembre	Diciembre	Gran Total
<b>Capacidad Instalada Nominal</b>	MW													<b>671.59</b>
<b>Capacidad Instalada Efectiva</b>														<b>586.12</b>
<b>1 Generación Bruta (SIN + Aislados) (3+...+9)</b>		<b>218,608.22</b>	<b>202,208.43</b>	<b>222,323.16</b>	<b>229,245.85</b>	<b>227,351.40</b>	<b>204,001.56</b>	<b>215,177.05</b>	<b>222,950.49</b>	<b>207,978.12</b>	<b>217,456.40</b>	<b>214,552.02</b>	<b>238,090.32</b>	<b>2,619,943.01</b>
<b>2 Generación Bruta SIN (3+...+8)</b>		<b>216,236.97</b>	<b>200,013.64</b>	<b>219,901.16</b>	<b>226,819.32</b>	<b>224,942.32</b>	<b>201,588.12</b>	<b>212,695.92</b>	<b>220,372.13</b>	<b>205,498.16</b>	<b>214,974.66</b>	<b>212,128.74</b>	<b>235,516.31</b>	<b>2,590,687.44</b>
3 Hidroeléctricas		7,328.20	5,376.20	18,721.60	39,620.60	32,082.60	23,859.10	47,382.50	50,410.40	33,746.00	23,491.60	13,687.50	7,629.00	<b>303,335.30</b>
4 Térmicas (Públicas)		23,804.85	22,824.42	10,876.80	13,615.32	14,581.05	17,938.55	15,564.04	15,951.43	15,533.96	16,689.48	15,949.83	22,053.00	<b>205,382.72</b>
5 Térmicas (Privadas)		167,396.02	155,983.18	174,416.15	160,681.90	159,744.45	142,772.44	130,653.14	133,480.83	137,618.58	153,780.63	161,583.90	180,751.21	<b>1,858,862.41</b>
6 Turbinas a Gas (Pública)		132.91	445.84	1,824.61	785.50	1,850.52	1,446.04	1,145.24	433.78	265.12	2,284.27	1,699.94	226.44	<b>12,540.21</b>
7 Turbinas a Gas (Privada)		0.00	0.00	0.00	0.00	19.69	0.00	0.00	16.20	0.00	155.18	103.74	0.00	<b>294.81</b>
8 Geotérmica		17,575.00	15,384.00	14,062.00	12,116.00	16,664.00	15,572.00	17,951.00	20,079.50	18,334.50	18,573.50	19,103.82	24,856.67	<b>210,271.99</b>
9 Sistemas Aislados		2,371.25	2,194.79	2,422.00	2,426.53	2,409.08	2,413.45	2,481.13	2,578.36	2,479.96	2,481.74	2,423.28	2,574.01	<b>29,255.57</b>
<b>10 Consumo Propio (SIN + Aislados) (12+...+18)</b>		<b>17,649.07</b>	<b>14,337.77</b>	<b>16,218.21</b>	<b>16,219.22</b>	<b>15,271.15</b>	<b>11,816.36</b>	<b>10,991.22</b>	<b>11,478.45</b>	<b>10,450.81</b>	<b>10,515.23</b>	<b>12,767.03</b>	<b>18,735.07</b>	<b>166,449.58</b>
<b>11 Consumo Propio SIN (12+...+17)</b>		<b>17,586.69</b>	<b>14,280.45</b>	<b>16,157.50</b>	<b>16,162.30</b>	<b>15,217.72</b>	<b>11,754.27</b>	<b>10,929.59</b>	<b>11,413.67</b>	<b>10,390.83</b>	<b>10,455.03</b>	<b>12,707.28</b>	<b>18,673.47</b>	<b>165,728.80</b>
12 Hidroeléctricas		336.52	167.67	163.91	155.83	308.28	505.32	1,138.84	1,614.76	812.99	660.50	727.20	696.36	<b>7,288.18</b>
13 Térmicas (Públicas)		2,341.73	2,024.01	1,162.72	1,655.91	1,792.61	2,026.66	1,887.56	1,932.14	1,923.14	1,800.79	1,516.76	2,271.33	<b>22,335.37</b>
14 Térmicas (Privadas)		13,245.55	10,562.56	12,982.15	12,687.57	11,377.92	7,651.02	6,238.86	6,166.17	6,169.54	6,359.00	8,664.05	13,231.07	<b>115,335.46</b>
15 Turbinas a Gas (Pública)		54.22	73.38	168.60	119.60	228.60	172.86	155.08	94.08	68.16	213.12	186.40	70.60	<b>1,604.70</b>
16 Turbinas a Gas (Privada)		9.97	8.63	10.12	9.60	10.40	9.21	9.95	10.22	9.51	11.01	9.85	9.11	<b>117.57</b>
17 Geotérmica		1,598.70	1,444.20	1,670.00	1,533.80	1,499.90	1,389.20	1,499.30	1,596.30	1,407.50	1,410.60	1,603.02	2,395.00	<b>19,047.52</b>
18 Sistemas Aislados		62.38	57.32	60.71	56.92	53.42	62.09	61.63	64.78	59.98	60.21	59.75	61.60	<b>720.78</b>
<b>19 Generación Neta (SIN + Aislados) (21+27)</b>		<b>200,959.16</b>	<b>187,870.66</b>	<b>206,104.95</b>	<b>213,026.63</b>	<b>212,080.25</b>	<b>192,185.21</b>	<b>204,185.83</b>	<b>211,472.03</b>	<b>197,527.31</b>	<b>206,941.17</b>	<b>201,784.99</b>	<b>219,355.24</b>	<b>2,453,493.43</b>
<b>20 Generación Neta SIN (21+...+26)</b>		<b>198,650.28</b>	<b>185,733.19</b>	<b>203,743.66</b>	<b>210,657.02</b>	<b>209,724.59</b>	<b>189,833.85</b>	<b>201,766.33</b>	<b>208,958.46</b>	<b>195,107.33</b>	<b>204,519.63</b>	<b>199,421.46</b>	<b>216,842.84</b>	<b>2,424,958.64</b>
21 Hidroeléctricas		6,991.68	5,208.53	18,557.69	39,464.77	31,774.32	23,353.78	46,243.66	48,795.64	32,933.02	22,831.10	12,960.30	6,932.65	<b>296,047.12</b>
22 Térmicas (Públicas)		21,463.11	20,800.41	9,714.08	11,959.41	12,788.44	15,911.89	13,676.48	14,019.29	13,610.82	14,888.68	14,433.07	19,781.67	<b>183,047.35</b>
23 Térmicas (Privadas)		154,150.47	145,420.62	161,434.00	147,994.33	148,366.52	135,121.42	124,414.28	127,314.66	131,449.05	147,421.63	152,919.85	167,520.13	<b>1,743,526.95</b>
24 Turbinas a Gas (Pública)		78.69	372.46	1,656.01	665.90	1,621.92	1,273.18	990.16	339.70	196.96	2,071.15	1,513.54	155.84	<b>10,935.51</b>
25 Turbinas a Gas (Privada)		-9.97	-8.63	-10.12	-9.60	9.29	-9.21	-9.95	5.98	-9.51	144.18	93.90	-9.11	<b>177.24</b>
26 Geotérmica		15,976.30	13,939.80	12,392.00	10,582.20	15,164.10	14,182.80	16,451.70	18,483.20	16,927.00	17,162.90	17,500.80	22,461.67	<b>191,224.47</b>
27 Sistemas Aislados		2,308.87	2,137.47	2,361.29	2,369.61	2,355.66	2,351.36	2,419.50	2,513.57	2,419.98	2,421.54	2,363.53	2,512.40	<b>28,534.79</b>
<b>28 Oferta Disponible (SIN) (20+30+31+32)</b>		<b>202,345.08</b>	<b>186,692.39</b>	<b>207,436.16</b>	<b>212,855.42</b>	<b>209,733.59</b>	<b>189,875.25</b>	<b>201,734.73</b>	<b>208,967.46</b>	<b>195,483.03</b>	<b>205,848.33</b>	<b>200,658.17</b>	<b>218,656.92</b>	<b>2,440,286.53</b>
<b>29 Oferta Disponible (Sistemas Aislados) (27)</b>		<b>2,308.87</b>	<b>2,137.47</b>	<b>2,361.29</b>	<b>2,369.61</b>	<b>2,355.66</b>	<b>2,351.36</b>	<b>2,419.50</b>	<b>2,513.57</b>	<b>2,419.98</b>	<b>2,421.54</b>	<b>2,363.53</b>	<b>2,512.40</b>	<b>28,534.79</b>
30 Intercambio con Centroamérica		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>0.00</b>
31 Neto Interconexión		-20.20	-0.80	25.00	-5.45	9.00	41.40	-31.60	9.00	-43.30	0.00	0.01	0.00	<b>-16.94</b>
32 Importaciones de Energía		3,715.00	960.00	3,667.50	2,203.85	0.00	0.00	0.00	0.00	419.00	1,328.70	1,236.70	1,814.08	<b>15,344.83</b>
<b>33 Pérdidas de Transmisión y Distribución (SIN) (28-38-40)</b>		<b>48,429.57</b>	<b>60,295.13</b>	<b>80,373.41</b>	<b>69,823.86</b>	<b>62,814.57</b>	<b>63,097.02</b>	<b>86,583.06</b>	<b>72,887.73</b>	<b>81,233.04</b>	<b>82,866.71</b>	<b>66,942.38</b>	<b>83,403.39</b>	<b>858,749.89</b>
<b>34 Pérdidas de Distribución (Sist. Aisl.) (29-39)</b>		<b>765.00</b>	<b>545.47</b>	<b>847.68</b>	<b>693.14</b>	<b>628.18</b>	<b>757.00</b>	<b>822.92</b>	<b>812.79</b>	<b>679.76</b>	<b>671.82</b>	<b>690.64</b>	<b>830.94</b>	<b>8,745.34</b>
35 Pérdidas de Distribución (SIN)		23.93	32.30	38.75	32.80	29.95	33.23	42.92	34.88	41.56	40.26	33.36	38.14	<b>35.19</b>
36 Pérdidas de Distribución (Sist. Aisl.)	%	33.13	25.52	35.90	29.25	26.67	32.19	34.01	32.34	28.09	27.74	29.22	33.07	<b>30.65</b>
<b>37 Ventas de Energía Eléctrica (38+39+40)</b>		<b>155,459.38</b>	<b>127,989.25</b>	<b>128,576.36</b>	<b>144,708.02</b>	<b>148,646.50</b>	<b>128,372.59</b>	<b>116,748.25</b>	<b>137,780.52</b>	<b>115,990.21</b>	<b>124,731.34</b>	<b>135,388.68</b>	<b>136,934.99</b>	<b>1,601,326.09</b>
38 S.I.N. (Disnorte + Dissur + Bluefields)		153,915.51	126,397.25	127,062.75	143,031.55	146,919.02	126,778.23	115,151.67	136,079.73	113,756.39	121,558.52	131,717.68	132,327.85	<b>1,574,696.15</b>
39 Sistemas Aislados (Públicos + Privados)		1,543.87	1,592.00	1,513.61	1,676.47	1,727.48	1,594.36	1,596.58	1,700.79	1,740.22	1,749.72	1,672.89	1,681.46	<b>19,789.44</b>
40 Exportaciones de Energía		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	493.60	1,423.10	1,998.11	2,925.68	<b>6,840.49</b>

**RESUMEN DE LOS PRINCIPALES INDICADORES DEL SUB-SECTOR ELECTRICIDAD  
SISTEMA INTERCONECTADO NACIONAL (S.I.N.) Y SISTEMAS AISLADOS - AÑO 2002**

Concepto / Meses	Unidad de Medida	Enero	Febrero	Marzo	Abril	Mayo	Junio	Julio	Agosto	Septiembre	Octubre	Noviembre	Diciembre	Gran Total
<b>Clientes (42+43)</b>		<b>475,901</b>	<b>475,585</b>	<b>477,000</b>	<b>478,511</b>	<b>480,155</b>	<b>481,973</b>	<b>483,751</b>	<b>486,041</b>	<b>487,416</b>	<b>484,264</b>	<b>477,458</b>	<b>457,086</b>	<b>478,762</b>
S.I.N. (Disnorte + Dissur + Bluefields)	Usuarios	459,396	459,126	460,397	461,846	463,735	465,410	467,320	469,590	471,166	467,754	461,163	440,868	<b>462,314</b>
Sistemas Aislados (Públicos + Privados)		16,505	16,459	16,603	16,665	16,420	16,563	16,431	16,451	16,250	16,510	16,295	16,218	<b>16,448</b>
<b>Ingresos por Ventas (45+46)</b>		<b>241,993.99</b>	<b>191,438.70</b>	<b>198,621.29</b>	<b>221,868.22</b>	<b>232,407.94</b>	<b>213,882.92</b>	<b>217,768.50</b>	<b>235,619.15</b>	<b>208,016.21</b>	<b>209,088.36</b>	<b>227,622.86</b>	<b>200,123.95</b>	<b>2,598,452.07</b>
S.I.N. (Disnorte + Dissur + Bluefields)	10 <sup>3</sup> de CS	239,174.42	188,458.23	195,807.73	218,722.03	229,153.48	210,786.48	214,464.81	232,114.29	204,405.22	205,218.48	223,710.02	196,178.09	<b>2,558,193.31</b>
Sistemas Aislados (Públicos + Privados)		2,819.57	2,980.47	2,813.55	3,146.18	3,254.45	3,096.44	3,303.69	3,504.86	3,610.99	3,869.87	3,912.84	3,945.86	<b>40,258.77</b>
<b>Precio Promedio [44/(38+39)]</b>		<b>1.55664</b>	<b>1.49574</b>	<b>1.54477</b>	<b>1.53321</b>	<b>1.56349</b>	<b>1.66611</b>	<b>1.86528</b>	<b>1.71011</b>	<b>1.80106</b>	<b>1.69566</b>	<b>1.70644</b>	<b>1.49336</b>	<b>1.62965</b>
S.I.N. (Disnorte + Dissur + Bluefields) (45/38)	CS / KWh	1.55393	1.49100	1.54103	1.52919	1.55973	1.66264	1.86246	1.70572	1.79687	1.68823	1.69841	1.48252	1.62456
Sistemas Aislados (Públicos + Privados) (46/39)		1.82630	1.87215	1.85884	1.87667	1.88393	1.94212	2.06922	2.06073	2.07502	2.21171	2.33897	2.34669	2.03436
<b>Consumo Combustible</b>														
Hidroeléctricas	10 <sup>3</sup> M <sup>3</sup> Agua	12,244.23	9,010.51	32,823.42	71,262.28	58,634.67	46,555.72	86,587.49	91,540.05	62,037.09	43,538.06	24,813.23	13,335.64	<b>552,382.39</b>
Térmicas - Fuel Oil (Públicas)		1,824.07	1,758.04	842.65	1,091.03	1,143.87	1,408.15	1,232.13	1,284.19	1,247.18	1,284.00	1,189.49	1,674.36	<b>15,979.15</b>
Térmicas - Fuel Oil (Privadas)	10 <sup>3</sup> Glns.	9,907.37	9,070.36	10,274.22	9,206.26	9,312.86	8,813.46	8,056.99	8,690.26	8,910.44	9,782.33	10,158.46	9,842.76	<b>112,025.78</b>
Turbinas a Gas (Pública) - Diesel Oil		6.84	31.68	138.65	59.06	141.26	110.64	88.12	32.65	17.34	174.27	125.66	12.79	<b>938.97</b>
Turbinas a Gas (Privada) - Diesel Oil		0.00	0.00	0.00	0.00	1.47	0.00	0.00	1.06	0.00	18.70	12.14	0.00	<b>33.37</b>
Geotérmica	10 <sup>3</sup> Ton. Vapor	170.93	155.42	145.53	129.78	176.23	173.37	184.78	179.56	165.29	155.56	150.78	157.81	<b>1,945.04</b>
Sistemas Aislados (Diesel Oil)	10 <sup>3</sup> Glns.	198.61	179.56	198.10	204.39	99.88	92.53	93.73	93.36	88.11	93.41	88.23	101.20	<b>1,531.13</b>
Sistemas Aislados (Fuel Oil)		0.00	0.00	0.00	0.00	93.00	90.12	95.14	103.05	101.15	96.29	101.57	102.48	<b>782.81</b>
Sistemas Aislados (Agua)	10 <sup>3</sup> M <sup>3</sup> Agua	107.15	112.01	111.90	105.26	120.79	121.27	113.09	122.05	116.39	122.49	114.56	122.94	<b>1,389.90</b>
Diesel Oil p/Generación y Calentamiento	10 <sup>3</sup> Glns.	6.96	20.70	9.26	8.30	5.87	11.16	6.11	6.53	9.65	10.07	13.09	24.85	<b>132.53</b>
<b>Residuos Vegetales</b>														
Leña	Ton. Métricas	184.21	7.52	3.76	0.00	5,178.50	14,092.00	8,555.00	0.00	0.00	0.00	353.76	281.95	<b>28,656.71</b>
Bagazo de Caña		52,776.26	64,920.30	70,429.98	77,960.98	51,814.94	1,738.12	0.00	0.00	0.00	0.00	20,882.38	91,555.70	<b>432,078.66</b>
<b>Rendimientos</b>														
Hidroeléctricas (3/51)	KWh / M <sup>3</sup>	0.60	0.60	0.57	0.56	0.55	0.51	0.55	0.55	0.54	0.54	0.55	0.57	<b>0.55</b>
Térmicas (Públicas) (4/52)		13.05	12.98	12.91	12.48	12.75	12.74	12.63	12.42	12.46	13.00	13.41	13.17	<b>12.85</b>
Térmicas (Privadas) (5/53)	KWh / Glns.	16.90	17.20	16.98	17.45	17.15	16.20	16.22	15.36	15.44	15.72	15.91	18.36	<b>16.59</b>
Turbinas a Gas (Pública) (6/54)		19.42	14.07	13.16	13.30	13.10	13.07	13.00	13.28	15.29	13.11	13.53	17.70	<b>13.36</b>
Turbinas a Gas (Privada) (7/55)		0.00	0.00	0.00	0.00	13.39	0.00	0.00	15.31	0.00	8.30	8.55	0.00	<b>8.84</b>
Geotérmica (8/56)	KWh/Ton. Vapor	102.82	98.99	96.62	93.36	94.56	89.82	97.15	111.83	110.93	119.40	126.70	157.51	<b>108.11</b>
Sistemas Aislados (Diesel Oil)	KWh / Glns.	11.76	12.01	12.04	11.70	10.84	11.41	11.40	11.37	10.80	10.81	10.93	10.77	<b>10.97</b>
Sistemas Aislados (Fuel Oil)		0.00	0.00	0.00	0.00	13.83	14.61	14.45	14.32	14.72	14.86	13.98	14.08	<b>14.35</b>
Sistemas Aislados (Agua)	KWh / M <sup>3</sup>	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	<b>0.34</b>
Demanda Máxima del SIN	MW	401.20	400.20	407.30	413.80	416.30	387.50	390.50	404.80	397.70	399.10	408.80	421.80	<b>421.80</b>
Demanda Mínima del SIN		190.40	194.00	195.40	202.70	175.30	187.50	181.19	188.60	181.20	187.10	183.10	194.90	<b>175.30</b>
Factor de Carga del SIN	%	67.85	69.29	68.14	70.41	68.14	69.33	70.68	70.76	69.12	69.72	67.72	67.58	<b>66.22</b>
Nivel Inicial de Apanás	m.s.n.m	954.76	954.61	954.45	953.90	952.84	952.19	953.18	953.91	953.65	953.69	953.82	954.25	<b>954.76</b>
Nivel Final de Apanás		954.61	954.45	953.90	952.84	952.19	953.18	953.91	953.65	953.69	953.82	954.25	954.38	<b>954.38</b>
Aporte Total de Apanás	10 <sup>3</sup> M <sup>3</sup>	5,025.91	1,304.53	-286.24	2,345.39	8,407.94	48,723.59	76,429.54	42,246.35	33,826.07	26,231.67	33,007.97	15,925.14	<b>293,187.86</b>

Fuente: Empresa Nacional de Transmisión Eléctrica S.A., Empresas Privadas y Públicas.

Privadas incluyen: Censa, Tipitapa, Corinto, Nicaragua Sugar Estate Limited (NSEL), Geosa (Ptas. Nicaragua y Chinandega), Ormat y Puerto Cabezas Power como Generadores, y como Distribuidores Disnorte y Dissur; así como los Sistemas Aislados de Cipalsa y

Las Empresas Públicas incluyen Hidrogesa (Centroamérica y Santa Bárbara), Gecsa (Managua y Las Brisas), y Sistemas Aislados a cargo de ENEL.

Las Ventas de Energía Eléctrica del SIN incluyen: Distribuidora de Electricidad del Norte (Disnorte), Distribuidora de Electricidad del Sur (Dissur) y Bluefields.

Dpto. Estadísticas - DAEFT, DGE - INE