





## INSUMOS PARA GENERACIÓN DE ENERGÍA ELÉCTRICA POR TIPO DE PLANTA

### SISTEMA INTERCONECTADO NACIONAL Y SISTEMAS AISLADOS

PLANTAS	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<b>Térmicas (10<sup>3</sup> Ton. Bagazo de Caña)</b>						179.29	178.59	171.76	161.66	350.09
. Nic.Sugar Estate Ltd. (NSEL)									47.65	176.64
. Monte Rosa										
. Agroindustrial Azucarera S.A. (Timal)						179.29	178.59	171.76	114.00	173.45
<b>Térmicas (Toneladas Métricas de)</b>										
. Nic.Sugar Estate Ltd. (NSEL) - Leña										7,768.62
. Monte Rosa, S.A. - Leña										
. Nic.Sugar Estate Ltd. (ISA) - Casc.Arroz										6,913.00
<b>Hidroeléctricas (10<sup>6</sup>m<sup>3</sup> de Agua)</b>	645.41	499.75	939.21	739.69	835.77	808.72	851.01	597.65	783.90	429.81
. Centroamérica (HIDROGESA)	330.40	257.15	443.33	373.08	360.19	402.25	402.14	294.70	432.00	208.31
. Santa Bárbara (HIDROGESA)	279.66	204.66	423.57	316.07	378.29	374.78	324.88	233.91	269.39	169.97
. Wabule	5.20	7.05	8.92	10.10	12.20	31.70	123.99	7.37	0.00	0.00
. Las Canoas	30.14	30.88	63.40	40.45	85.09			61.66	82.50	51.53
. Atder - BL El Bote										0.00
<b>Geotérmicas (10<sup>3</sup>Ton/Vapor)</b>	3,995.20	4,405.93	3,863.94	3,775.60	3,329.20	3,177.04	2,333.36	1,432.73	1,195.00	1,487.06
. Ormat Momotombo Power Company a/	3,995.20	4,405.93	3,863.94	3,775.60	3,329.20	3,177.04	2,333.36	1,432.73	1,195.00	1,487.06
. Polaris Energy Nicaragua, S.A. (Pensa)										
. Ormat Energy Converters (OEC) - MMC Agua Caliente										
<b>Sistemas Aislados (Diesel Oil - 10<sup>3</sup>Glns)</b>	1,346.34	1,601.35	1,874.94	1,966.98	1,772.38	1,138.61	1,215.47	1,380.67	1,841.91	1,872.91
<b>Sistemas Aislados (Fuel Oil - 10<sup>3</sup>Glns)</b>										
<b>Sistemas Aislados (Agua - 10<sup>3</sup>m<sup>3</sup>)</b>										
<b>RESUMEN</b>										
<b>Total Fuel Oil (10<sup>3</sup> Glns)</b>	47,585.10	62,707.53	57,124.69	56,674.33	68,582.00	82,190.91	79,614.71	98,197.65	99,642.09	116,049.43
<b>Total Diesel (10<sup>3</sup> Glns)</b>	1,433.74	1,652.94	3,727.64	12,955.71	10,740.48	3,581.97	10,363.56	26,811.10	13,246.58	6,870.43
<b>Total Vapor Geotérmico (10<sup>3</sup>Ton/Vapor)</b>	3,995.20	4,405.93	3,863.94	3,775.60	3,329.20	3,177.04	2,333.36	1,432.73	1,195.00	1,487.06
<b>Total Agua (10<sup>6</sup>m<sup>3</sup>)</b>	645.41	499.75	939.21	739.69	835.77	808.72	851.01	597.65	783.90	429.81
<b>Total Agua Caliente (Salmuera) 10<sup>3</sup> M<sup>3</sup></b>										
<b>Total Leña (Toneladas)</b>										7,768.62
<b>Total Cascarilla Arroz (Toneladas)</b>										6,913.00
<b>Total Bagazo de Caña (10<sup>3</sup> Toneladas)</b>						179.29	178.59	171.76	161.66	350.09
<b>Total Fuel Oil (10<sup>3</sup> Barriles)</b>	1,132.98	1,493.04	1,360.11	1,349.39	1,632.90	1,956.93	1,895.59	2,338.04	2,372.43	2,763.08
<b>Total Diesel (10<sup>3</sup> Barriles)</b>	34.14	39.36	88.75	308.47	255.73	85.29	246.75	638.36	315.39	163.58

MMC = Miles de Metros Cúbicos.

Dirección de Estudios Económicos y Tarifas - INE



**INSUMOS PARA GENERACIÓN DE ENERGÍA ELÉCTRICA POR TIPO DE PLANTA**

**SISTEMA INTERCONECTADO NACIONAL Y SISTEMAS AISLADOS**

<b>PLANTAS</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
<b>Térmicas (Fuel Oil - 10<sup>3</sup>Glns)</b>	<b>127,558.11</b>	<b>128,004.93</b>	<b>128,480.58</b>	<b>133,464.66</b>	<b>124,671.75</b>	<b>136,273.13</b>	<b>130,457.76</b>	<b>133,486.84</b>	<b>147,292.01</b>	<b>143,140.86</b>
. Nicaragua (GEOSA)	36,752.84	46,280.85	39,498.28	40,256.17	33,536.96	43,240.21	40,967.70	44,366.92	39,834.54	30,621.27
. Nicaragua (Calentamiento)	26.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
. Managua (GECSA)	20,388.82	15,979.15	15,747.86	18,482.38	15,311.28	16,283.07	17,522.80	18,303.38	14,207.07	14,213.48
. Managua (Calentamiento)	3.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
. Censa - AMFELS	15,696.52	12,058.15	18,148.19	19,795.32	20,002.95	19,381.30	13,837.01	8,641.96	8,813.98	14,963.80
. Empresa Energética de Corinto	29,766.59	29,219.09	30,281.49	29,849.61	31,348.35	31,744.26	32,845.77	30,683.30	30,250.99	30,378.11
. Tipitapa Power Company	24,915.74	24,394.97	24,672.47	24,640.70	24,472.21	25,597.28	25,013.43	24,116.69	23,965.73	23,076.56
. Generadora San Rafael, S.A. (Gesarsa)				440.47			271.05	717.76	564.94	141.53
. Che Guevara I (Tipitapa) (ALBANISA)								2,985.78	6,227.97	2,665.59
. Che Guevara II (Masaya) (ALBANISA)								2,747.69	5,898.06	2,639.26
. Che Guevara III (Managua) (ALBANISA)								923.37	6,406.57	3,495.32
. Che Guevara IV (Masaya) (ALBANISA)									5,602.41	2,645.32
. Che Guevara V (Masaya) (ALBANISA)									5,310.60	1,995.59
. Che Guevara VI (Nagarote) (ALBANISA)									209.15	3,820.46
. Che Guevara VII (Nagarote) (ALBANISA)										8,469.43
. Che Guevara VIII (León) (ALBANISA)										4,015.14
. Nic.Sugar Estate Ltd. (NSEL)	7.65	72.71	132.29	0.00	0.00	27.01	0.00	0.00	0.00	0.00
<b>Turbinas a Gas + Térmicas (Diesel Oil - 10<sup>3</sup>Glns) - Generación</b>	<b>3,982.99</b>	<b>972.33</b>	<b>1,760.50</b>	<b>2,268.03</b>	<b>2,068.12</b>	<b>5,020.33</b>	<b>17,697.62</b>	<b>5,329.32</b>	<b>3,786.04</b>	<b>2,159.86</b>
. Chinandega (GEOSA)	334.96	33.37	97.69	97.08	67.27	110.68	0.00	0.00	0.00	0.00
. Las Brisas (GECSA)	3,648.03	938.97	1,662.80	2,078.56	2,000.85	4,909.66	10,568.39	1,361.63	705.70	299.88
. Hugo Chávez (ALBANISA) - Motor Comb. Interna							7,084.57	3,422.01	2,765.36	748.77
. Che Guevara I (Tipitapa) (ALBANISA)								118.61	60.45	151.66
. Che Guevara II (Masaya) (ALBANISA)								85.05	58.15	139.40
. Che Guevara III (Managua) (ALBANISA)								225.50	53.66	133.57
. Che Guevara IV (Masaya) (ALBANISA)									38.58	102.17
. Che Guevara V (Masaya) (ALBANISA)									38.48	67.75
. Che Guevara VI (Nagarote) (ALBANISA)									15.35	80.14
. Che Guevara VII (Nagarote) (ALBANISA)										265.19
. Che Guevara VIII (León) (ALBANISA)										142.81
. Generadora San Rafael, S.A. (Gesarsa)				92.38			44.65	116.51	50.31	28.50
<b>Térmicas + Turbinas a Gas (Diesel - 10<sup>3</sup>Glns) - Otros Usos</b>	<b>80.31</b>	<b>132.53</b>	<b>320.52</b>	<b>93.98</b>	<b>68.31</b>	<b>102.58</b>	<b>122.70</b>	<b>324.41</b>	<b>100.34</b>	<b>94.94</b>
. Managua	2.76	1.07	0.24	0.00	0.00	0.00	0.00	3.41	7.57	4.09
. Generadora San Rafael, S.A. (Gesarsa)								1.24	0.37	0.19
. Chinandega	1.86	2.29	0.00	0.00	1.55	0.80	1.12	0.41	0.00	0.00
. Las Brisas	2.15	0.69	3.36	0.00	0.00	0.00	0.00	0.87	0.44	2.18
. Hugo Chávez (ALBANISA) - Motor Comb. Interna								0.05	0.69	1.72
. Empresa Energética Corinto	73.53	128.48	316.93	93.98	66.76	101.78	108.63	300.81	71.22	67.04
. Tipitapa Power Company							12.95	17.62	20.05	19.73



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### SISTEMA INTERCONECTADO NACIONAL Y SISTEMAS AISLADOS

PLANTAS	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>Térmicas (10<sup>3</sup> Ton. Bagazo de Caña)</b>	<b>147.36</b>	<b>432.08</b>	<b>531.67</b>	<b>924.92</b>	<b>1,010.79</b>	<b>950.94</b>	<b>1,103.37</b>	<b>990.21</b>	<b>1,041.36</b>	<b>1,167.95</b>
. Nic.Sugar Estate Ltd. (NSEL)	147.36	174.93	269.12	494.36	585.44	563.41	640.29	574.08	562.51	682.85
. Monte Rosa	/	257.15	262.55	430.56	425.35	387.53	463.08	416.13	478.85	485.10
. Agroindustrial Azucarera S.A. (Timal)	/	/	/	/	/	/	/	/	/	/
<b>Térmicas (Toneladas Métricas de)</b>	<b>/</b>	<b>/</b>	<b>/</b>	<b>/</b>	<b>/</b>	<b>/</b>	<b>/</b>	<b>/</b>	<b>/</b>	<b>/</b>
. Nic.Sugar Estate Ltd. (NSEL) - Leña	0.00	27,824.00	21,489.00	50,670.40	25,972.84	26,746.42	29,334.24	29,677.57	24,320.00	19,532.01
. Monte Rosa, S.A. - Leña	/	832.71	360.90	1,071.43	203.04	300.74	0.00	0.00	0.00	0.00
. Nic.Sugar Estate Ltd. (ISA) - Casc.Arroz	0.00	0.00	6,333.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Hidroeléctricas (10<sup>6</sup>m<sup>3</sup> de Agua)</b>	<b>350.90</b>	<b>552.38</b>	<b>544.46</b>	<b>582.11</b>	<b>801.60</b>	<b>558.93</b>	<b>578.36</b>	<b>994.53</b>	<b>546.53</b>	<b>939.71</b>
. Centroamérica (HIDROGESA)	212.28	310.48	292.86	337.95	392.29	319.77	299.41	496.16	307.12	452.85
. Santa Bárbara (HIDROGESA)	138.62	241.90	251.60	244.16	409.31	239.16	274.70	482.26	225.87	472.03
. Wabule	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
. Las Canoas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
. Atder - BL El Bote	0.00	0.00	0.00	0.00	0.00	0.00	4.25	16.10	13.54	14.83
<b>Geotérmicas (10<sup>3</sup>Ton/Vapor)</b>	<b>2,055.55</b>	<b>1,945.04</b>	<b>1,740.61</b>	<b>1,758.33</b>	<b>1,990.78</b>	<b>2,532.61</b>	<b>2,055.39</b>	<b>2,758.57</b>	<b>2,738.13</b>	<b>2,652.69</b>
. Ormat Momotombo Power Company a/	2,055.55	1,945.04	1,740.61	1,758.33	1,699.73	1,730.53	1,069.42	1,647.19	1,516.99	1,543.73
. Polaris Energy Nicaragua, S.A. (Pensa)	/	/	/	/	291.05	802.08	985.97	1,111.38	1,221.14	1,108.96
. Ormat Energy Converters (OEC) - MMC Agua Caliente	/	/	9,532.62	8,724.48	9,146.49	9,239.55	7,713.66	8,663.83	7,910.25	8,930.28
<b>Sistemas Aislados (Diesel Oil - 10<sup>3</sup>Glns)</b>	<b>1,964.49</b>	<b>1,531.13</b>	<b>1,130.34</b>	<b>1,171.31</b>	<b>2,090.34</b>	<b>1,784.66</b>	<b>2,028.64</b>	<b>1,963.93</b>	<b>1,599.37</b>	<b>1,370.91</b>
<b>Sistemas Aislados (Fuel Oil - 10<sup>3</sup>Glns)</b>	<b>/</b>	<b>782.81</b>	<b>1,266.46</b>	<b>1,381.36</b>	<b>961.31</b>	<b>1,456.43</b>	<b>1,391.74</b>	<b>1,688.83</b>	<b>1,671.84</b>	<b>1,948.37</b>
<b>Sistemas Aislados (Agua - 10<sup>3</sup>m<sup>3</sup>)</b>	<b>/</b>	<b>1,389.90</b>	<b>1,380.87</b>	<b>1,465.10</b>	<b>1,515.76</b>	<b>1,304.24</b>	<b>282.25</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>RESUMEN</b>										
<b>Total Fuel Oil (10<sup>3</sup> Glns)</b>	<b>127,558.11</b>	<b>128,787.73</b>	<b>129,747.05</b>	<b>134,846.02</b>	<b>125,633.06</b>	<b>137,729.56</b>	<b>131,849.50</b>	<b>135,175.66</b>	<b>148,963.85</b>	<b>145,089.23</b>
<b>Total Diesel (10<sup>3</sup> Glns)</b>	<b>6,027.78</b>	<b>2,635.99</b>	<b>3,211.36</b>	<b>3,533.31</b>	<b>4,226.77</b>	<b>6,907.57</b>	<b>19,848.96</b>	<b>7,617.66</b>	<b>5,485.75</b>	<b>3,625.71</b>
<b>Total Vapor Geotérmico (10<sup>3</sup>Ton/Vapor)</b>	<b>2,055.55</b>	<b>1,945.04</b>	<b>1,740.61</b>	<b>1,758.33</b>	<b>1,990.78</b>	<b>2,532.61</b>	<b>2,055.39</b>	<b>2,758.57</b>	<b>2,738.13</b>	<b>2,652.69</b>
<b>Total Agua (10<sup>6</sup>m<sup>3</sup>)</b>	<b>350.90</b>	<b>553.77</b>	<b>545.84</b>	<b>583.58</b>	<b>803.12</b>	<b>560.23</b>	<b>578.65</b>	<b>994.53</b>	<b>546.53</b>	<b>939.71</b>
<b>Total Agua Caliente (Salmuera) 10<sup>3</sup> M<sup>3</sup></b>	<b>/</b>	<b>/</b>	<b>9,532.62</b>	<b>8,724.48</b>	<b>9,146.49</b>	<b>9,239.55</b>	<b>7,713.66</b>	<b>8,663.83</b>	<b>7,910.25</b>	<b>8,930.28</b>
<b>Total Leña (Toneladas)</b>	<b>0.00</b>	<b>28,656.71</b>	<b>21,849.90</b>	<b>51,741.83</b>	<b>26,175.88</b>	<b>27,047.16</b>	<b>29,334.24</b>	<b>29,677.57</b>	<b>24,320.00</b>	<b>19,532.01</b>
<b>Total Cascarilla Arroz (Toneladas)</b>	<b>0.00</b>	<b>0.00</b>	<b>6,333.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Total Bagazo de Caña (10<sup>3</sup> Toneladas)</b>	<b>147.36</b>	<b>432.08</b>	<b>531.67</b>	<b>924.92</b>	<b>1,010.79</b>	<b>950.94</b>	<b>1,103.37</b>	<b>990.21</b>	<b>1,041.36</b>	<b>1,167.95</b>
<b>Total Fuel Oil (10<sup>3</sup> Barriles)</b>	<b>3,037.10</b>	<b>3,066.37</b>	<b>3,089.22</b>	<b>3,210.62</b>	<b>2,991.26</b>	<b>3,279.28</b>	<b>3,139.27</b>	<b>3,218.47</b>	<b>3,546.76</b>	<b>3,454.51</b>
<b>Total Diesel (10<sup>3</sup> Barriles)</b>	<b>143.52</b>	<b>62.76</b>	<b>76.46</b>	<b>84.13</b>	<b>100.64</b>	<b>164.47</b>	<b>472.59</b>	<b>181.37</b>	<b>130.61</b>	<b>86.33</b>

MMC = Miles de Metros Cúbicos.

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