

**INSTITUTO COSTARRICENSE DE ELECTRICIDAD**

**CENTRO NACIONAL DE CONTROL DE ELECTRICIDAD**

# **Generación y Demanda**

## **Informe Mensual**

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**Octubre, 2022**



## I. DEMANDA DE ENERGÍA

| Atención de Demanda por Fuente<br>enero – octubre, 2022 |              |         |
|---------------------------------------------------------|--------------|---------|
| Fuente                                                  | MWh          | %       |
| Bagazo                                                  | 48 323,96    | 0,49%   |
| Eólico                                                  | 1 103 106,10 | 11,15%  |
| Geotérmico                                              | 1 387 555,59 | 14,02%  |
| Hidro-Exportación                                       | 7 220 482,55 | 72,96%  |
| Solar                                                   | 6 647,92     | 0,07%   |
| Térmico                                                 | 90 334,01    | 0,91%   |
| Importación                                             | 40 525,52    | 0,41%   |
|                                                         | 9 896 975,65 | 100,00% |

Atención de  
Demanda  
con fuentes  
renovables  
**98,68%**

Tabla 1. Atención de la demanda por fuente. La fila "Hidro-Exportación" se refiere a la generación hidroeléctrica restándole las exportaciones.



Gráfico 1. Distribución de la atención de la demanda por fuente.

## Comparación demanda mensual de energía y crecimiento

### Demanda MWh

| Mes       | 2021         | % Crecimiento mensual | 2022         | % Crecimiento mensual   | % Crecimiento anual |
|-----------|--------------|-----------------------|--------------|-------------------------|---------------------|
| Ene       | 930 628,34   | 1,82%                 | 988 736,99   | 1,23%                   | 6,24%               |
| Feb       | 881 169,75   | -5,31%                | 915 494,12   | -7,41%                  | 3,90%               |
| Mar       | 985 668,66   | 11,86%                | 1 049 420,62 | 14,63%                  | 6,47%               |
| Abr       | 948 612,08   | -3,76%                | 991 648,05   | -5,51%                  | 4,54%               |
| May       | 982 201,55   | 3,54%                 | 1 024 591,56 | 3,32%                   | 4,32%               |
| Jun       | 959 890,57   | -2,27%                | 966 428,23   | -5,68%                  | 0,68%               |
| Jul       | 984 210,77   | 2,53%                 | 988 251,97   | 2,26%                   | 0,41%               |
| Ago       | 977 168,76   | -0,72%                | 1 002 955,51 | 1,49%                   | 2,64%               |
| Set       | 948 163,20   | -2,97%                | 968 721,68   | -3,41%                  | 2,17%               |
| Oct       | 988 670,17   | 4,27%                 | 1 000 726,93 | 3,30%                   | 1,22%               |
| Nov       | 959 428,22   | -2,96%                | -            | -                       | -                   |
| Dic       | 976 717,19   | 1,80%                 | -            | -                       | -                   |
| Acumulado | 9 586 383,86 |                       | 9 896 975,65 | % crecimiento acumulado | 3,24%               |

Tabla 2. Comparación de la demanda de energía 2021 - 2022.

### Demandas máximas mensuales

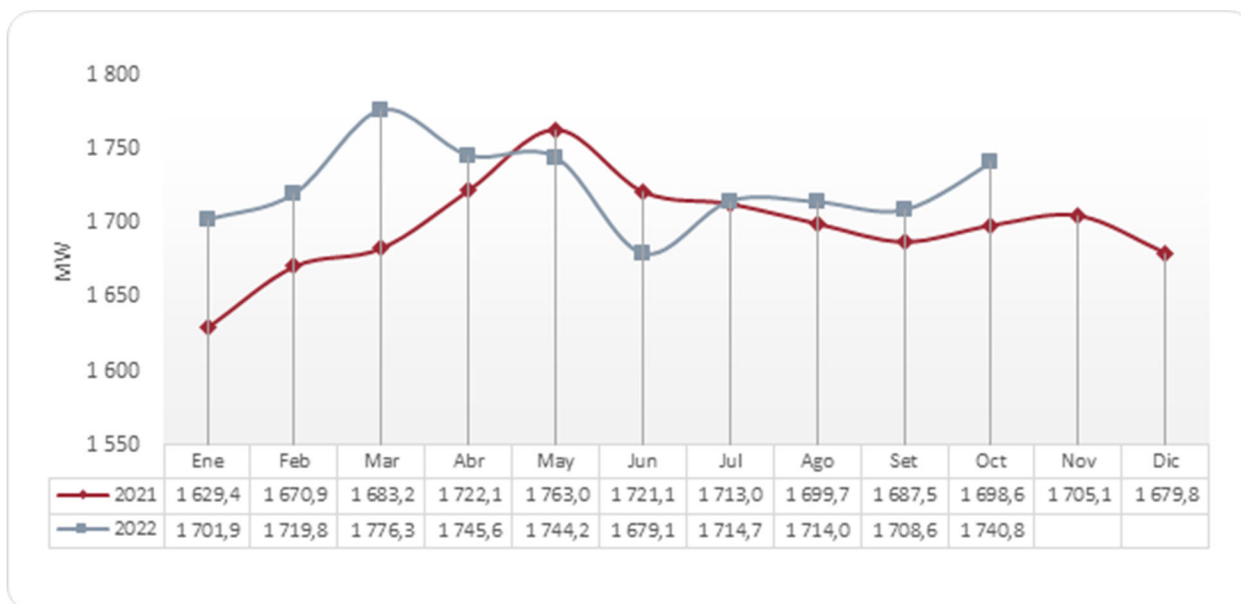


Gráfico 2. Comparación de la demanda de potencia máxima mensual 2021 - 2022.

## PRODUCCIÓN DE ENERGÍA

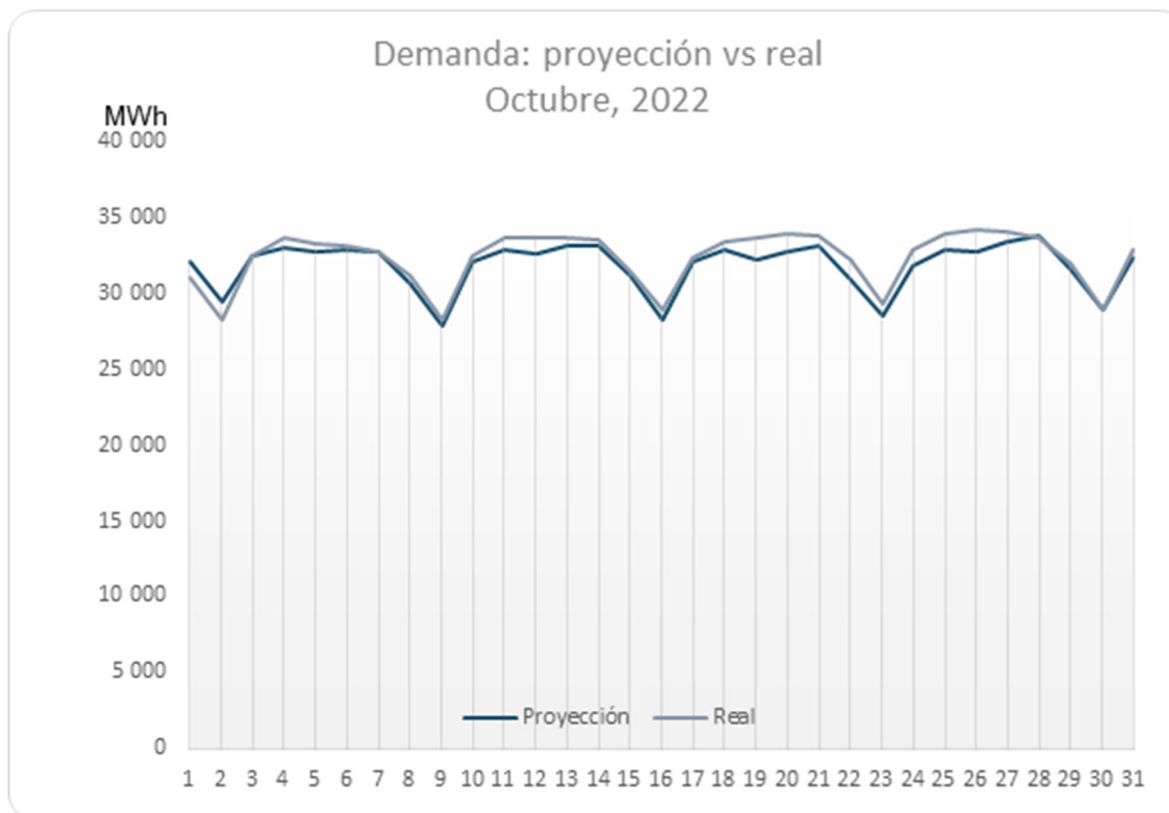


Gráfico 3. Comparación de la producción de real de energía vs proyección.

| Producción de Energía MWh |                      |                      |             |   |
|---------------------------|----------------------|----------------------|-------------|---|
| Acumulado a octubre       | 2021                 | 2022                 | Crecimiento |   |
| Hidroeléctrico            | 7 663 728,4          | 7 889 971,9          | 2,95%       | ↑ |
| Termoeléctrico            | 1 993,9              | 90 334,0             |             | ↑ |
| Geotérmico                | 1 435 074,2          | 1 387 555,6          | -3,31%      | ↓ |
| Bagazo                    | 56 767,8             | 48 324,0             | -14,87%     | ↓ |
| Eólico                    | 1 242 101,9          | 1 103 106,1          | -11,19%     | ↓ |
| Solar                     | 7 668,9              | 6 647,9              | -13,31%     | ↓ |
| <b>Producción bruta</b>   | <b>10 407 335,01</b> | <b>10 525 939,45</b> | 1,14%       | ↑ |
| Intercambio MWh           | - 820 951,15         | - 628 963,81         |             |   |
| <b>Demanda MWh</b>        | <b>9 586 383,86</b>  | <b>9 896 975,65</b>  | 3,24%       | ↑ |
| Demanda Máxima MW         | <b>1 763,00</b>      | <b>1 776,39</b>      | 0,76%       | ↑ |

Tabla 3. Producción de energía y crecimiento 2021 - 2022.

## Producción de energía

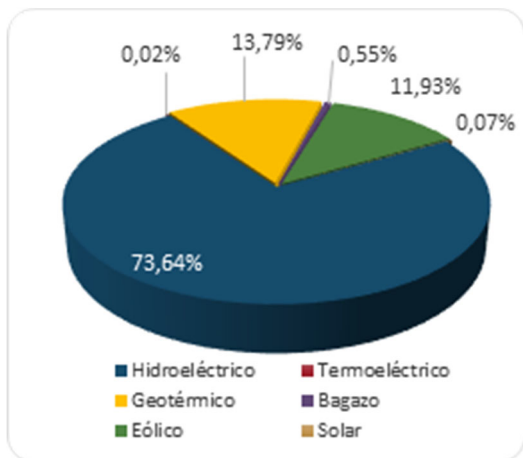


Gráfico 4. Producción de energía MWh por fuente - 2021.

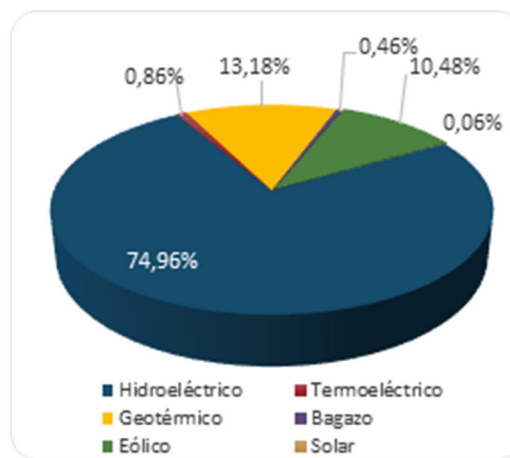


Gráfico 5. Producción de energía MWh por fuente - 2022.

## Producción de energía termoeléctrica

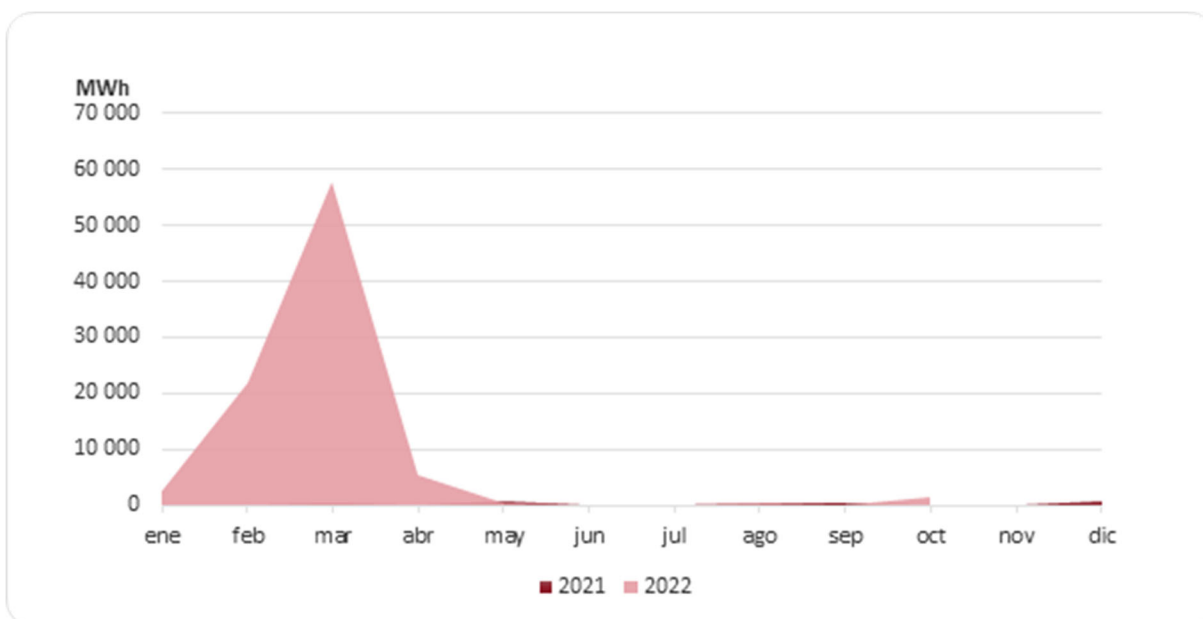


Gráfico 6. Comparación de generación termoeléctrica 2021 - 2022.

## II. EMBALSE ARENAL

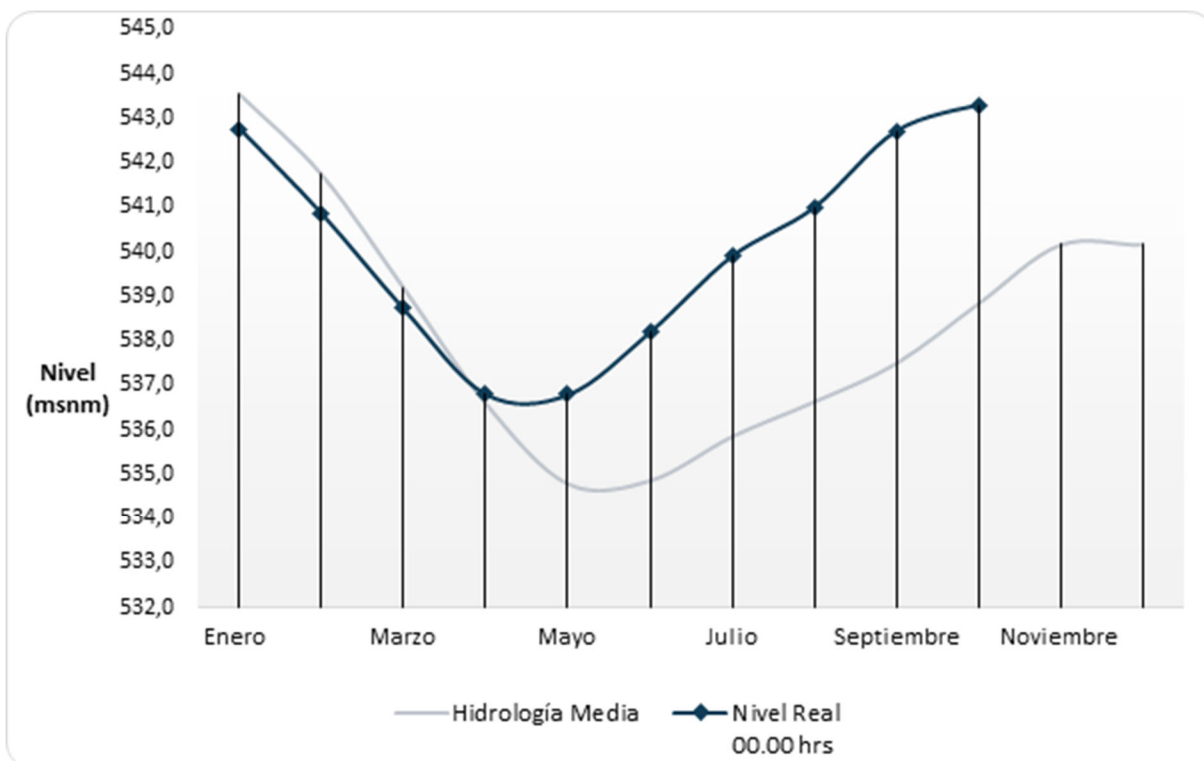


Gráfico 7. Curva nivel del embalse Arenal hidrología media.

| Curva Embalse Arenal 2022 |                  |                      |
|---------------------------|------------------|----------------------|
| Mes                       | Hidrología Media | Nivel Real 00.00 hrs |
| Enero                     | 543,55           | 542,76               |
| Febrero                   | 541,75           | 540,86               |
| Marzo                     | 539,20           | 538,73               |
| Abril                     | 536,61           | 536,82               |
| Mayo                      | 534,81           | 536,81               |
| Junio                     | 534,88           | 538,21               |
| Julio                     | 535,87           | 539,91               |
| Agosto                    | 536,65           | 541,00               |
| Septiembre                | 537,51           | 542,71               |
| Octubre                   | 538,85           | 543,30               |
| Noviembre                 | 540,17           |                      |
| Diciembre                 | 540,17           |                      |
| * Nivel (m.s.n.m.)        |                  |                      |

Tabla 4. Datos de la curva del nivel del embalse Arenal.

### III. DEMANDA MÁXIMA

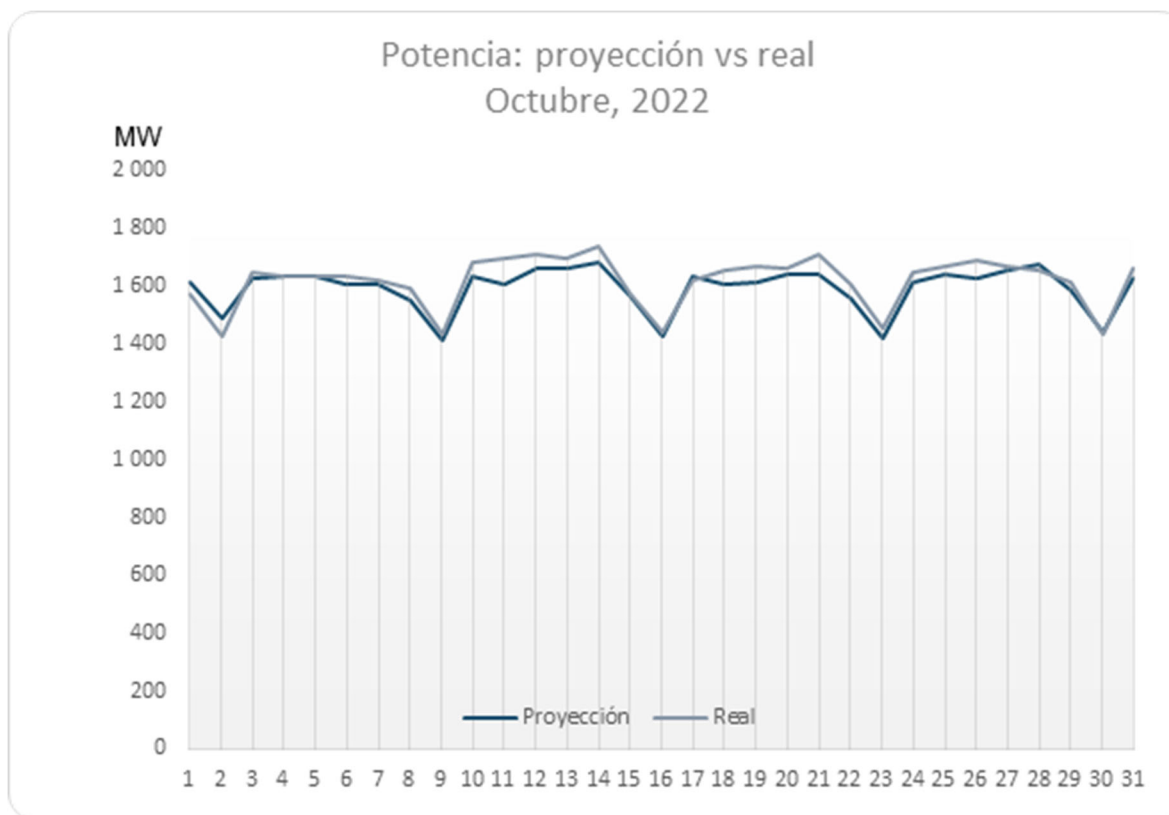


Gráfico 8. Comparación de la demanda de potencia – octubre, 2022.

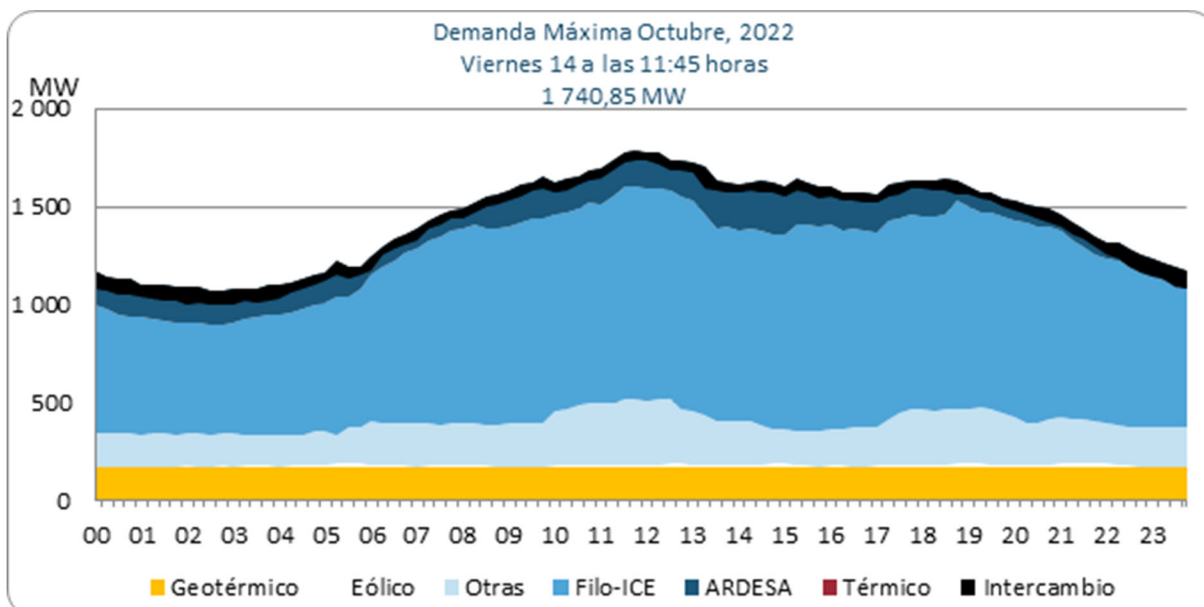


Gráfico 9. Composición de la demanda máxima – octubre del año 2022, registrada el viernes 14.

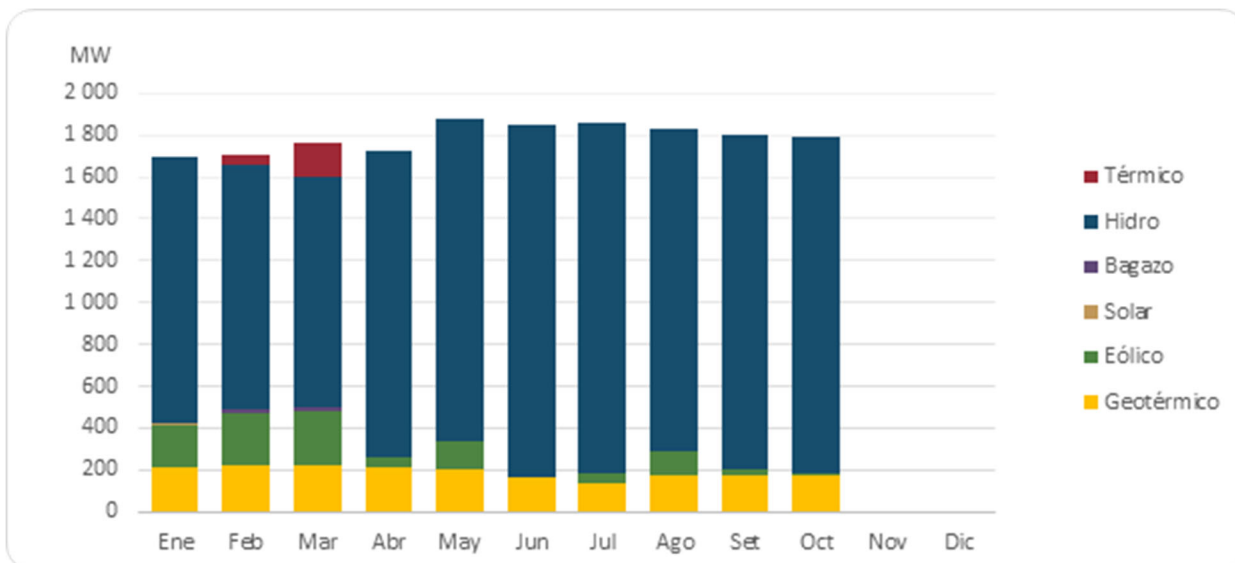


Gráfico 10. Composición de la demanda por fuente a la hora de la máxima enero – octubre, 2022.

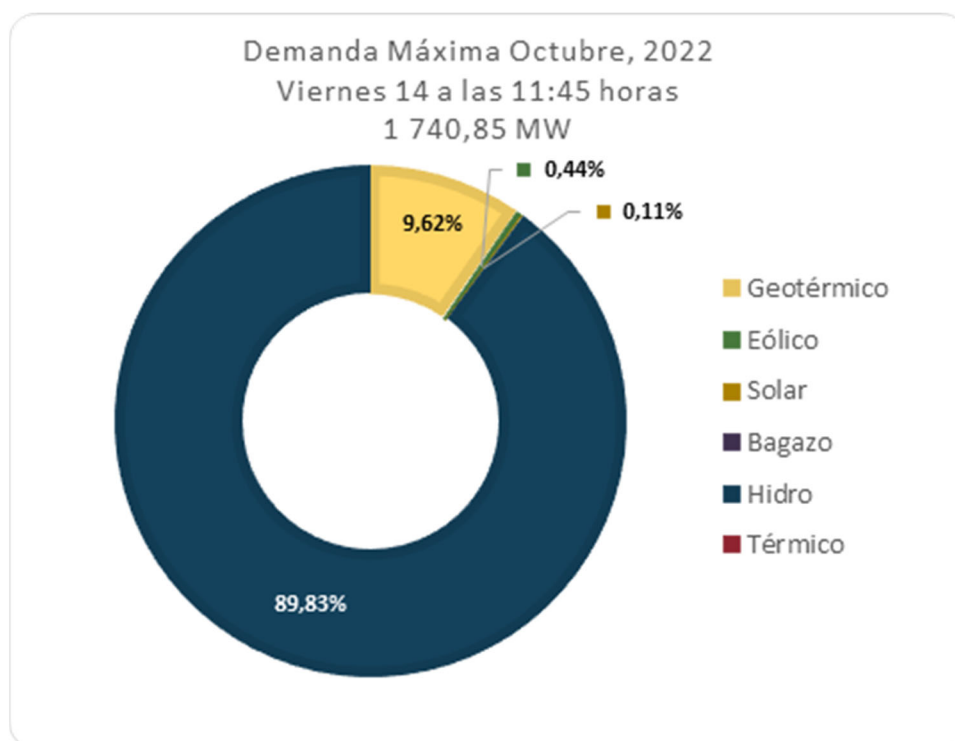


Gráfico 11. Composición de la demanda por fuente a la hora de la máxima.



**Sistema de Información del S.E.N.**  
**Resumen Anual 2 0 2 2**  
**Generación - Intercambio - Demanda Nacional MWh**

|                | Plantas                     | Enero         | Febrero     | Marzo         | Abril         | Mayo          | Junio         | Julio         | Agosto        | Septiembre    | Octubre       | Noviembre   | Diciembre  | ACUMULADO      |               |
|----------------|-----------------------------|---------------|-------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------------|------------|----------------|---------------|
| Otras Empresas | E.S.P.H.                    | 18 010,745    | 11 821,234  | 10 297,253    | 9 590,092     | 13 509,979    | 25 044,614    | 31 041,179    | 22 998,075    | 24 955,889    | 25 791,634    | -           | -          | 193 060,693    |               |
|                | J.A.S.E.C.                  | 5 898,568     | 5 563,435   | 5 900,817     | 6 606,802     | 9 343,061     | 11 987,598    | 11 614,161    | 8 040,657     | 6 921,416     | 6 865,448     | -           | -          | 78 741,963     |               |
|                | C.N.F.L.                    | 22 062,730    | 16 105,671  | 13 378,385    | 17 923,083    | 43 676,661    | 61 966,520    | 45 948,326    | 60 032,939    | 57 070,864    | 58 794,725    | -           | -          | 396 959,904    |               |
|                | Valle Central               | 3 643,833     | 4 590,283   | 3 325,724     | 1 706,443     | 512,210       | 587,752       | 1 683,778     | 1 026,402     | 363,457       | 1 292,290     | -           | -          | 18 732,172     |               |
|                | Coopelesca                  | 17 762,077    | 14 424,576  | 15 563,204    | 19 231,641    | 24 445,256    | 30 434,826    | 32 162,461    | 29 723,972    | 26 311,084    | 25 134,703    | -           | -          | 235 194,430    |               |
|                | CoopeGuanacaste             | 10 688,507    | 7 793,226   | 7 782,969     | 7 236,892     | 9 979,537     | 13 369,930    | 18 559,403    | 17 954,623    | 11 197,398    | 12 625,526    | -           | -          | 117 188,011    |               |
|                | Juanilama Solar             | 800,395       | 734,590     | 824,494       | 711,497       | 610,426       | 501,271       | 572,003       | 604,557       | 539,120       | 432,045       | -           | -          | 6 330,399      |               |
|                | PE Río Naranjo              | 3 500,384     | 3 237,421   | 3 193,618     | 2 067,171     | 1 157,472     | 1 224,753     | 2 965,369     | 1 754,172     | 615,182       | 1 612,184     | -           | -          | 21 327,726     |               |
|                | PE Cacao                    | 8 831,037     | 9 456,584   | 8 833,149     | 4 207,043     | 893,602       | 1 021,410     | 1 786,457     | 1 287,699     | 530,258       | 574,314       | -           | -          | 37 421,554     |               |
|                | Coneléctricas               | 12 400,251    | 7 906,219   | 8 219,786     | 10 341,824    | 19 675,441    | 23 248,529    | 27 254,483    | 23 301,603    | 21 692,862    | 22 474,952    | -           | -          | 176 515,950    |               |
| Los Santos     | 4 481,022                   | 4 909,790     | 4 014,944   | 1 996,410     | 565,999       | 709,526       | 2 486,114     | 1 437,705     | 361,952       | 1 395,423     | -             | -           | 22 358,885 |                |               |
|                | Subtotal                    | 108 080,179   | 86 543,029  | 81 334,344    | 81 618,897    | 124 369,643   | 170 096,729   | 176 073,736   | 168 162,402   | 150 559,482   | 156 993,245   | -           | -          | 1 303 831,687  |               |
| Paralela       | Hidro                       | 17 455,094    | 13 898,822  | 15 383,002    | 18 758,910    | 24 261,837    | 26 808,582    | 28 245,378    | 25 091,608    | 21 997,236    | 19 776,250    | -           | -          | 211 676,717    |               |
|                | Térmica                     | 15 097,232    | 15 103,211  | 15 715,500    | 2 408,023     | -             | -             | -             | 0,000         | -             | -             | -           | -          | 48 323,965     |               |
|                | Eólica                      | 93 318,329    | 81 888,931  | 92 165,050    | 64 462,309    | 26 502,269    | 21 839,956    | 47 708,868    | 32 774,619    | 9 888,809     | 25 158,458    | -           | -          | 495 707,599    |               |
|                | Subtotal                    | 125 870,655   | 110 890,964 | 123 263,552   | 85 629,242    | 50 764,106    | 48 648,538    | 75 954,246    | 57 866,227    | 31 886,045    | 44 934,708    | -           | -          | 755 708,282    |               |
| ICE Hidro      | Garita 1 y 2                | 15 892,393    | 12 366,018  | 12 133,701    | 13 984,687    | 16 372,804    | 12 543,208    | 16 708,242    | 17 701,713    | 14 565,723    | 16 668,748    | -           | -          | 148 937,237    |               |
|                | Garita 3 y 4                | 18 072,571    | 17 797,345  | 18 808,053    | 24 516,327    | 34 624,715    | 54 933,481    | 53 254,196    | 53 609,439    | 52 774,611    | 52 151,000    | -           | -          | 380 541,736    |               |
|                | Río Macho                   | 26 749,615    | 20 854,747  | 24 465,981    | 36 438,209    | 69 606,190    | 78 538,730    | 19 345,374    | -             | -             | -             | -           | -          | 275 998,845    |               |
|                | Cachí                       | 32 856,087    | 26 265,233  | 29 838,392    | 37 106,735    | 78 567,180    | 44 910,313    | 66 188,943    | 73 150,163    | 80 878,355    | 76 778,627    | -           | -          | 546 540,028    |               |
|                | Arenal                      | 107 307,358   | 96 574,925  | 104 298,218   | 97 693,144    | 45 196,496    | 26 388,854    | 26 113,439    | 31 314,455    | 27 523,968    | 38 726,101    | -           | -          | 601 136,957    |               |
|                | Dengo                       | 116 982,104   | 105 566,741 | 116 130,911   | 109 969,418   | 51 484,289    | 33 521,011    | 33 159,724    | 37 863,371    | 37 961,304    | 47 158,729    | -           | -          | 689 797,601    |               |
|                | Sandillal                   | 19 971,605    | 17 995,693  | 19 674,021    | 18 615,156    | 8 465,743     | 2 470,979     | 3 463,652     | 6 385,132     | 7 519,063     | 8 467,512     | -           | -          | 113 028,557    |               |
|                | Toro I                      | 4 617,015     | 3 575,576   | 4 242,114     | 4 284,608     | 7 323,901     | 9 091,988     | 10 889,034    | 9 928,605     | 9 531,339     | 9 275,846     | -           | -          | 72 760,027     |               |
|                | Toro II                     | 13 829,769    | 10 784,831  | 12 377,361    | 13 395,496    | 20 982,600    | 24 608,151    | 29 109,241    | 26 666,543    | 27 161,933    | 21 887,780    | -           | -          | 200 803,705    |               |
|                | Toro III                    | 10 134,095    | 7 921,710   | 9 136,293     | 10 075,302    | 15 805,439    | 18 561,890    | 21 320,010    | 19 718,251    | 19 952,324    | 16 161,748    | -           | -          | 148 787,061    |               |
|                | Angostura                   | 40 128,370    | 32 649,460  | 39 530,850    | 52 753,212    | 98 992,038    | 86 496,698    | 78 671,328    | 85 614,387    | 79 049,677    | 72 114,618    | -           | -          | 666 000,638    |               |
|                | Reventazón                  | 52 019,757    | 40 174,712  | 51 197,824    | 78 131,760    | 139 669,293   | 125 903,632   | 117 586,898   | 113 545,906   | 128 989,914   | 122 166,975   | -           | -          | 969 386,670    |               |
|                | Peñas Blancas               | 8 009,355     | 5 528,816   | 6 392,432     | 7 739,184     | 12 961,906    | 16 326,374    | 17 825,901    | 16 874,214    | 17 029,499    | 11 082,162    | -           | -          | 119 769,841    |               |
|                | Cariblanco                  | 14 964,535    | 10 474,208  | 11 241,030    | 12 874,246    | 27 149,862    | 36 457,643    | 34 227,358    | 28 672,156    | 31 532,837    | 25 278,108    | -           | -          | 232 871,982    |               |
|                | Pirris                      | 26 094,027    | 14 143,635  | 11 905,236    | 33 855,145    | 60 995,499    | 59 958,352    | 51 500,596    | 84 308,272    | 82 999,798    | 82 084,402    | -           | -          | 507 844,961    |               |
|                | Echandi                     | 2 832,919     | 1 755,100   | 1 947,775     | 1 899,573     | 2 866,065     | 2 630,130     | 2 811,622     | 1 236,773     | 2 442,462     | 2 238,479     | -           | -          | 22 660,897     |               |
|                |                             | Subtotal      | 510 461,573 | 424 428,748   | 473 320,191   | 553 332,199   | 691 064,019   | 633 341,433   | 582 175,558   | 606 589,379   | 619 912,808   | 602 240,834 | -          | -              | 5 696 866,741 |
|                | Molín Gas                   | 0,001         | 0,001       | 332,198       | 0,003         | 0,000         | 0,003         | 0,003         | -             | 0,002         | 0,000         | -           | -          | 332,211        |               |
|                | Molín Gas CNFL              | 0,012         | 0,010       | 122,409       | 0,013         | 0,019         | 0,024         | 0,022         | 20,975        | 0,010         | 98,780        | -           | -          | 242,274        |               |
|                | Guápiles                    | 0,014         | 0,019       | 1 097,135     | 1 485,504     | -             | 13,527        | 17,873        | 0,008         | 0,014         | 90,949        | -           | -          | 2 705,042      |               |
|                | Orotina                     | 0,254         | -           | 1 103,630     | 1 106,422     | 25,623        | 26,885        | 0,000         | 17,592        | -             | 124,249       | -           | -          | 2 404,657      |               |
|                | Garabito                    | 2 651,675     | 22 047,312  | 55 246,519    | 2 872,329     | 231,192       | 0,008         | 0,003         | 241,339       | 59,483        | 1 299,968     | -           | -          | 84 649,827     |               |
|                |                             | Subtotal      | 2 651,956   | 22 047,341    | 57 901,891    | 5 464,271     | 256,835       | 40,447        | 17,901        | 279,914       | 59,508        | 1 613,946   | -          | -              | 90 334,011    |
|                |                             |               |             |               |               |               |               |               |               |               |               |             |            |                |               |
| ICE Geo        | Miravalles I                | 18 678,272    | 33 253,376  | 37 665,024    | 34 926,848    | 34 504,192    | 32 331,520    | 11 238,400    | 21 248,512    | 32 364,800    | 35 654,912    | -           | -          | 291 865,856    |               |
|                | Miravalles II               | 33 785,656    | 33 071,707  | 35 896,038    | 35 287,894    | 33 803,874    | 31 105,092    | 34 936,659    | 35 838,154    | 33 331,893    | 35 805,761    | -           | -          | 342 862,727    |               |
|                | Miravalles III              | 21 315,328    | 19 144,644  | 19 889,488    | 17 666,248    | 19 306,603    | 17 701,826    | 16 309,548    | 11 044,318    | 30,588        | 1 730,392     | -           | -          | 144 138,982    |               |
|                | Boca de Pozo 1              | 3 314,964     | 3 126,156   | 3 454,416     | 3 358,824     | 924,264       | -             | -             | 1 517,592     | 2 993,136     | 3 124,832     | -           | -          | 21 814,184     |               |
|                | Miravalles V                | -             | -           | -             | -             | -             | -             | -             | -             | -             | -             | -           | -          | -              |               |
|                | Pailas                      | 11 693,550    | 23 933,568  | 27 900,946    | 28 419,600    | 28 177,770    | 10 493,192    | 15 646,545    | 23 418,261    | 23 864,072    | 25 610,623    | -           | -          | 219 158,125    |               |
|                | Las Pailas II               | 41 049,753    | 36 812,846  | 39 709,873    | 36 889,179    | 37 148,645    | 36 038,975    | 36 975,381    | 35 855,817    | 32 505,318    | 34 729,926    | -           | -          | 367 715,711    |               |
|                | Subtotal                    | 129 837,522   | 149 342,296 | 164 515,785   | 156 548,592   | 153 865,347   | 127 670,605   | 115 106,532   | 128 922,654   | 125 089,807   | 136 656,446   | -           | -          | 1 387 555,586  |               |
|                | ICE Eólico (Tejona)         | 5 670,215     | 5 058,644   | 6 683,505     | 4 167,623     | 1 072,770     | 694,539       | 1 804,225     | 1 221,868     | 275,894       | 1 156,620     | -           | -          | 27 805,902     |               |
|                | ICE Solar (Miravalles)      | -             | -           | 20,534        | 50,638        | 42,973        | 31,890        | 32,556        | 40,307        | 42,248        | 56,380        | -           | -          | 317,524        |               |
| BOT            | Hidro                       | 50 534,715    | 41 719,908  | 48 053,053    | 58 104,517    | 103 340,652   | 90 825,076    | 98 915,233    | 101 561,821   | 98 805,528    | 91 906,959    | -           | -          | 783 767,463    |               |
|                | Eólico                      | 87 243,404    | 80 193,566  | 84 324,131    | 57 938,808    | 24 737,599    | 21 733,952    | 49 982,668    | 33 327,046    | 10 677,870    | 29 593,215    | -           | -          | 479 752,260    |               |
|                | Subtotal                    | 137 778,120   | 121 913,474 | 132 377,184   | 116 043,326   | 128 078,252   | 112 559,028   | 148 897,901   | 134 888,867   | 109 483,398   | 121 500,174   | -           | -          | 1 263 519,723  |               |
|                |                             |               |             |               |               |               |               |               |               |               |               |             |            |                |               |
| Resumen        | Producción S.E.N.           | 1 020 350,220 | 920 224,497 | 1 039 416,986 | 1 002 854,786 | 1 149 513,943 | 1 093 083,208 | 1 100 062,655 | 1 097 971,618 | 1 037 309,188 | 1 065 152,352 | -           | -          | 10 525 939,455 |               |
|                | Intercambio                 | (31 613,231)  | (4 730,380) | 10 003,633    | (11 206,735)  | (124 922,383) | (126 654,981) | (111 810,687) | (95 016,106)  | (68 587,509)  | (64 425,426)  | -           | -          | (628 963,806)  |               |
|                | Producción Demanda Nacional | 988 736,989   | 915 494,117 | 1 049 420,619 | 991 648,051   | 1 024 591,560 | 966 428,227   | 988 251,968   | 1 002 955,512 | 968 721,680   | 1 000 726,926 | -           | -          | 9 896 975,649  |               |
|                | Demanda Máxima MW           | 1 701,93      | 1 719,81    | 1             |               |               |               |               |               |               |               |             |            |                |               |

**Sistema de Información del S.E.N.**  
**Resumen Anual 2 0 2 2**  
**Generación Otras Empresas MWh**

|                        | Plantas            | Enero              | Febrero           | Marzo             | Abril             | Mayo               | Junio              | Julio              | Agosto             | Septiembre         | Octubre            | Noviembre | Diciembre | ACUMULADO            |
|------------------------|--------------------|--------------------|-------------------|-------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-----------|-----------|----------------------|
| ESPH                   | Jorge Manuel Dengo | 1 744,731          | 1 222,089         | 1 153,129         | 1 132,806         | 1 706,964          | 2 472,549          | 2 518,707          | 2 432,456          | 2 247,228          | 2 393,041          | -         | -         | 19 023,701           |
|                        | Los Negros         | 4 234,241          | 2 606,993         | 2 107,413         | 1 706,334         | 2 604,557          | 5 036,609          | 6 107,987          | 0,179              | 4 481,768          | 5 838,368          | -         | -         | 34 724,445           |
|                        | Los Negros II      | 9 139,463          | 5 753,522         | 4 655,829         | 4 310,150         | 6 301,777          | 14 505,911         | 19 149,614         | 17 396,598         | 15 251,936         | 14 656,742         | -         | -         | 111 121,542          |
|                        | Tacares            | 2 892,310          | 2 238,630         | 2 380,883         | 2 440,801         | 2 896,681          | 3 029,544          | 3 264,872          | 3 168,843          | 2 974,956          | 2 903,484          | -         | -         | 28 191,005           |
|                        | Subtotal           | 18 010,745         | 11 821,234        | 10 297,253        | 9 590,092         | 13 509,979         | 25 044,614         | 31 041,179         | 22 998,075         | 24 955,889         | 25 791,634         | -         | -         | 193 060,693          |
| JASEC                  | Barro Morado       | 664,132            | 426,086           | 440,108           | 478,459           | 642,950            | 657,938            | 586,646            | 613,398            | 632,847            | 461,835            | -         | -         | 5 604,399            |
|                        | Birris12           | 4 644,885          | 3 328,912         | 3 356,351         | 3 791,372         | 5 360,367          | 7 745,221          | 7 677,951          | 6 187,294          | 5 049,956          | 5 415,702          | -         | -         | 52 558,011           |
|                        | Birris3            | 122,077            | 1 425,147         | 1 714,286         | 1 676,479         | 2 074,979          | 2 190,634          | 2 142,795          | -                  | -                  | -                  | -         | -         | 11 346,397           |
|                        | Tuis               | 467,474            | 383,290           | 390,072           | 660,492           | 1 264,765          | 1 393,805          | 1 206,769          | 1 239,965          | 1 238,613          | 987,911            | -         | -         | 9 233,156            |
|                        | Subtotal           | 5 898,568          | 5 563,435         | 5 900,817         | 6 606,802         | 9 343,061          | 11 987,598         | 11 614,161         | 8 040,657          | 6 921,416          | 6 865,448          | -         | -         | 78 741,963           |
| CNFL                   | CNFL               | -                  | -                 | -                 | -                 | -                  | -                  | -                  | -                  | -                  | -                  | -         | -         | -                    |
|                        | Belén              | 4 845,368          | 3 658,942         | 488,143           | 1 633,340         | 5 503,201          | 6 346,473          | 6 709,831          | 6 433,563          | 5 443,902          | 6 400,819          | -         | -         | 47 463,582           |
|                        | Brasil             | 4 916,991          | 3 833,078         | 4 252,802         | 6 499,499         | 12 949,371         | 16 819,053         | 11 101,109         | 14 881,116         | 14 971,730         | 14 315,346         | -         | -         | 104 540,095          |
|                        | Electrona          | 910,196            | 614,987           | 718,097           | 1 378,521         | 3 187,868          | 3 877,627          | 3 622,515          | 3 676,460          | 3 682,741          | 3 151,693          | -         | -         | 24 820,705           |
|                        | Cote               | 820,380            | 215,441           | 280,771           | 337,914           | 780,473            | 1 456,766          | 1 951,658          | 1 974,590          | 1 548,696          | 575,609            | -         | -         | 9 942,299            |
|                        | El Encanto         | 2 463,090          | 1 595,012         | 1 615,464         | 1 745,577         | 3 839,749          | 5 400,580          | 5 722,398          | 5 922,033          | 5 595,317          | 5 860,136          | -         | -         | 39 759,355           |
|                        | Río Segundo        | 325,745            | 205,227           | 184,514           | 220,341           | 313,038            | 630,707            | 639,354            | 636,306            | 512,220            | 635,750            | -         | -         | 4 303,201            |
|                        | Ventanas           | 880,656            | 431,029           | 545,933           | 928,642           | 3 997,894          | 4 825,531          | 3 047,488          | 3 142,162          | 3 776,611          | 4 529,127          | -         | -         | 26 105,073           |
|                        | Daniel Gutiérrez   | 2 787,010          | 2 720,678         | 2 687,812         | 2 355,642         | 5 900,363          | 10 745,594         | 12 032,749         | 10 414,067         | 10 980,892         | 10 905,963         | -         | -         | 71 530,770           |
|                        | Balsa Inferior     | 4 113,295          | 2 831,276         | 2 604,849         | 2 823,607         | 7 204,705          | 11 864,189         | 1 121,224          | 12 952,643         | 10 558,757         | 12 420,280         | -         | -         | 68 494,825           |
|                        | Subtotal           | 22 062,730         | 16 105,671        | 13 378,385        | 17 923,083        | 43 676,661         | 61 966,520         | 45 948,326         | 60 032,939         | 57 070,864         | 58 794,725         | -         | -         | 396 959,904          |
|                        | Valle Central      | 3 643,833          | 4 590,283         | 3 325,724         | 1 706,443         | 512,210            | 587,752            | 1 683,778          | 1 026,402          | 363,457            | 1 292,290          | -         | -         | 18 732,172           |
| Coopelesca             | Chocosuelas        | 6 341,709          | 5 048,626         | 4 880,322         | 4 479,196         | 5 786,311          | 9 366,294          | 10 993,748         | 9 711,941          | 9 096,414          | 9 437,806          | -         | -         | 75 142,366           |
|                        | Cubujuquí          | 5 984,423          | 5 112,701         | 5 586,134         | 9 161,020         | 9 841,168          | 11 105,191         | 10 655,442         | 9 829,916          | 8 501,849          | 6 925,842          | -         | -         | 82 703,687           |
|                        | Hidrozarcas        | 3 812,499          | 3 332,669         | 3 739,868         | 3 842,446         | 5 906,777          | 6 651,500          | 7 134,339          | 6 880,566          | 5 811,989          | 5 481,936          | -         | -         | 52 594,588           |
|                        | La Esperanza       | 1 624,076          | 930,581           | 1 356,880         | 1 748,978         | 2 911,000          | 3 311,841          | 3 378,932          | 3 301,548          | 2 900,833          | 3 289,119          | -         | -         | 24 753,789           |
|                        | Subtotal           | 17 762,707         | 14 424,576        | 15 563,204        | 19 231,641        | 24 445,256         | 30 434,826         | 32 162,461         | 29 723,972         | 26 311,084         | 25 134,703         | -         | -         | 235 194,430          |
| Coope-Guanacaste       | Bijagua            | 5 944,107          | 4 374,057         | 4 374,450         | 3 804,071         | 5 328,648          | 6 553,734          | 9 614,594          | 9 469,530          | 7 129,421          | 7 011,823          | -         | -         | 63 604,434           |
|                        | Canalete           | 4 744,401          | 3 419,170         | 3 408,519         | 3 432,821         | 4 650,889          | 6 816,196          | 8 944,810          | 8 485,093          | 4 067,977          | 5 613,702          | -         | -         | 53 583,578           |
|                        | Juanilama Solar    | 800,395            | 734,590           | 824,494           | 711,497           | 610,426            | 501,271            | 572,003            | 604,557            | 539,120            | 432,045            | -         | -         | 6 330,399            |
|                        | PE Río Naranjo     | 3 500,384          | 3 237,421         | 3 193,618         | 2 067,171         | 1 157,472          | 1 224,753          | 2 965,369          | 1 754,172          | 615,182            | 1 612,184          | -         | -         | 21 327,726           |
|                        | PE Cacao           | 8 831,037          | 9 456,584         | 8 833,149         | 4 207,043         | 893,602            | 1 021,410          | 1 786,457          | 1 287,699          | 530,258            | 574,314            | -         | -         | 37 421,554           |
|                        | Subtotal           | 23 820,323         | 21 221,822        | 20 634,230        | 14 222,603        | 12 641,037         | 16 117,364         | 23 883,234         | 21 601,050         | 12 881,958         | 15 244,069         | -         | -         | 182 267,691          |
| Cone-<br>léctricas     | Pocosol            | 8 728,906          | 5 469,550         | 5 811,034         | 7 709,712         | 12 518,342         | 15 250,562         | 16 783,341         | 14 471,868         | 12 830,034         | 13 511,554         | -         | -         | 113 084,904          |
|                        | San Lorenzo        | 3 671,345          | 2 436,669         | 2 408,752         | 2 632,112         | 7 157,099          | 7 997,967          | 10 471,141         | 8 829,734          | 8 862,828          | 8 963,398          | -         | -         | 63 431,046           |
|                        | Subtotal           | 12 400,251         | 7 906,219         | 8 219,786         | 10 341,824        | 19 675,441         | 23 248,529         | 27 254,483         | 23 301,603         | 21 692,862         | 22 474,952         | -         | -         | 176 515,950          |
| Coopesantos Los Santos |                    | 4 481,022          | 4 909,790         | 4 014,944         | 1 996,410         | 565,999            | 709,526            | 2 486,114          | 1 437,705          | 361,952            | 1 395,423          | -         | -         | 22 358,885           |
| <b>Total</b>           |                    | <b>108 080,179</b> | <b>86 543,029</b> | <b>81 334,344</b> | <b>81 618,897</b> | <b>124 369,643</b> | <b>170 096,729</b> | <b>176 073,736</b> | <b>168 162,402</b> | <b>150 559,482</b> | <b>156 993,245</b> | <b>-</b>  | <b>-</b>  | <b>1 303 831,687</b> |

**Sistema de Información del S.E.N.**  
**Resumen Anual 2 0 2 2**  
**Generación Privados MWh - Ley 7200, capítulo I**

|               | Plantas             | Enero              | Febrero            | Marzo              | Abril             | Mayo              | Junio             | Julio             | Agosto            | Septiembre        | Octubre           | Noviembre | Diciembre | ACUMULADO          |
|---------------|---------------------|--------------------|--------------------|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------|-----------|--------------------|
| <b>Hidro</b>  | Tapezco             | 72,336             | 40,064             | 50,891             | 37,982            | 72,372            | 63,326            | 69,996            | 74,998            | 69,280            | 60,498            | -         | -         | 611,744            |
|               | Vara Blanca         | 562,085            | 387,945            | 523,200            | 484,662           | 1 186,511         | 1 469,744         | 1 472,183         | 1 297,337         | 1 259,739         | 917,895           | -         | -         | 9 561,300          |
|               | El Angel            | -                  | -                  | -                  | -                 | -                 | 0,073             | 0,000             | 0,005             | -                 | 0,005             | -         | -         | 0,084              |
|               | El Angel Ampliación | 1 112,023          | 876,839            | 863,048            | 1 372,600         | 2 163,996         | 2 563,361         | 2 218,494         | 1 995,135         | 2 377,110         | 1 709,089         | -         | -         | 17 251,694         |
|               | Caño Grande         | 1 103,099          | 1 017,356          | 1 215,817          | 1 390,006         | 1 767,779         | 1 751,893         | 1 788,085         | 1 696,639         | 1 619,850         | 1 536,886         | -         | -         | 14 887,411         |
|               | Santa Rufina        | 209,175            | 192,461            | 214,007            | 204,824           | 44,975            | -                 | -                 | -                 | -                 | -                 | -         | -         | 865,442            |
|               | La Rebeca           | 32,913             | 32,828             | 38,772             | 29,800            | 45,498            | 45,877            | 52,725            | 36,471            | 40,418            | 43,105            | -         | -         | 398,407            |
|               | Platanar            | -                  | -                  | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -         | -         | -                  |
|               | Zuerkata            | 707,927            | 474,375            | 464,291            | 465,115           | 1 527,893         | 1 651,283         | 1 571,348         | 1 413,441         | 1 538,082         | 1 319,843         | -         | -         | 11 133,599         |
|               | Don Pedro           | -                  | -                  | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -         | -         | -                  |
|               | Poás I y II         | -                  | -                  | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -         | -         | -                  |
|               | Matamoros           | 2 138,046          | 1 481,275          | 1 409,095          | 1 207,072         | 1 589,050         | 2 326,160         | 2 586,455         | 2 174,312         | 2 397,060         | 2 525,512         | -         | -         | 19 834,036         |
|               | Río Lajas           | 3 308,480          | 2 731,272          | 2 872,028          | 3 259,363         | 3 921,138         | 4 495,988         | 5 531,156         | 4 230,846         | 3 621,419         | 3 261,479         | -         | -         | 37 233,170         |
|               | El Embalse          | 580,151            | 412,369            | 404,024            | 367,133           | 475,167           | 869,420           | 988,823           | 839,951           | 743,899           | 788,648           | -         | -         | 6 469,586          |
|               | Volcán              | -                  | -                  | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -         | -         | -                  |
|               | Río Segundo II      | -                  | -                  | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -         | -         | -                  |
| <b>Eólico</b> | Doña Julia          | 6 287,253          | 5 042,847          | 5 868,525          | 8 251,266         | 9 267,406         | 9 980,435         | 9 906,207         | 9 204,259         | 6 287,108         | 5 766,992         | -         | -         | 75 862,297         |
|               | Caño Grande III     | 1 341,606          | 1 209,192          | 1 459,303          | 1 689,087         | 2 200,050         | 1 591,022         | 2 059,905         | 2 128,215         | 2 043,271         | 1 846,297         | -         | -         | 17 567,947         |
|               | <b>Subtotal</b>     | <b>17 455,094</b>  | <b>13 898,822</b>  | <b>15 383,002</b>  | <b>18 758,910</b> | <b>24 261,837</b> | <b>26 808,582</b> | <b>28 245,378</b> | <b>25 091,608</b> | <b>21 997,236</b> | <b>19 776,250</b> | <b>-</b>  | <b>-</b>  | <b>211 676,717</b> |
|               | Aeroenergía         | 2 628,399          | 2 293,972          | 2 273,131          | 1 610,940         | 638,522           | 512,208           | 1 225,958         | 729,965           | 133,923           | 387,801           | -         | -         | 12 434,822         |
|               | Vientos del Este    | 5 584,007          | 5 632,709          | 6 298,472          | 4 341,188         | 2 136,435         | 1 788,104         | 3 911,223         | 2 636,451         | 1 027,702         | 2 471,792         | -         | -         | 35 828,083         |
|               | PESA (Tilarán)      | -                  | -                  | -                  | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -         | -         | -                  |
|               | MOVASA              | 8 397,876          | 7 283,113          | 7 518,763          | 5 226,954         | 1 404,727         | 1 425,828         | 2 331,630         | 2 277,239         | 540,941           | 1 204,722         | -         | -         | 37 611,794         |
|               | Tilawind            | 11 671,833         | 10 835,845         | 11 361,450         | 7 653,285         | 2 324,628         | 1 820,356         | 3 526,772         | 2 839,301         | 804,640           | 1 467,761         | -         | -         | 54 305,871         |
|               | PE Mogote           | 12 968,004         | 11 796,787         | 12 606,056         | 8 629,890         | 3 611,319         | 2 925,145         | 6 065,556         | 4 117,059         | 1 043,404         | 3 657,147         | -         | -         | 67 420,368         |
|               | Altamira            | 13 871,703         | 12 446,893         | 13 549,638         | 9 105,227         | 4 007,028         | 3 432,457         | 8 455,851         | 5 524,573         | 1 887,934         | 4 794,269         | -         | -         | 77 075,572         |
|               | Campos Azules       | 13 241,937         | 11 360,541         | 13 466,743         | 9 704,326         | 4 307,005         | 3 230,261         | 7 417,861         | 5 192,379         | 1 654,418         | 4 149,453         | -         | -         | 73 724,923         |
|               | Vientos de la Perla | 13 290,851         | 11 023,183         | 13 254,823         | 9 493,207         | 4 163,981         | 3 514,103         | 7 996,191         | 5 059,346         | 1 363,476         | 3 728,862         | -         | -         | 72 888,022         |
|               | Vientos de Miramar  | 11 663,718         | 9 215,889          | 11 835,973         | 8 697,292         | 3 908,623         | 3 191,495         | 6 777,826         | 4 398,305         | 1 432,372         | 3 296,652         | -         | -         | 64 418,144         |
|               | <b>Subtotal</b>     | <b>93 318,329</b>  | <b>81 888,931</b>  | <b>92 165,050</b>  | <b>64 462,309</b> | <b>26 502,269</b> | <b>21 839,956</b> | <b>47 708,868</b> | <b>32 774,619</b> | <b>9 888,809</b>  | <b>25 158,458</b> | <b>-</b>  | <b>-</b>  | <b>495 707,599</b> |
| <b>Bagazo</b> | Ingenio Taboga      | 5 966,507          | 5 853,231          | 5 918,508          | 1 925,105         | -                 | -                 | -                 | -                 | -                 | -                 | -         | -         | 19 663,351         |
|               | Ingenio El Viejo    | 9 130,725          | 9 249,980          | 9 796,991          | 482,918           | -                 | -                 | -                 | 0,000             | -                 | -                 | -         | -         | 28 660,614         |
|               | <b>Subtotal</b>     | <b>15 097,232</b>  | <b>15 103,211</b>  | <b>15 715,500</b>  | <b>2 408,023</b>  | <b>-</b>          | <b>-</b>          | <b>-</b>          | <b>0,000</b>      | <b>-</b>          | <b>-</b>          | <b>-</b>  | <b>-</b>  | <b>48 323,965</b>  |
|               | <b>Total</b>        | <b>125 870,655</b> | <b>110 890,964</b> | <b>123 263,552</b> | <b>85 629,242</b> | <b>50 764,106</b> | <b>48 648,538</b> | <b>75 954,246</b> | <b>57 866,227</b> | <b>31 886,045</b> | <b>44 934,708</b> | <b>-</b>  | <b>-</b>  | <b>755 708,282</b> |

Sistema de Información del S.E.N.  
Resumen Anual 2 0 2 2  
Generación BOT MWh – Ley 7200, capítulo II

|       | Plantas         | Enero       | Febrero     | Marzo       | Abril       | Mayo        | Junio       | Julio       | Agosto      | Septiembre  | Octubre     | Noviembre | Diciembre | ACUMULADO     |
|-------|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------|-----------|---------------|
|       | El General      | 13 506,681  | 11 486,814  | 13 556,621  | 17 884,230  | 19 675,350  | 20 923,884  | 22 563,255  | 20 039,949  | 15 793,171  | 13 216,104  | -         | -         | 168 646,058   |
|       | La Joya         | 12 999,886  | 10 518,227  | 12 173,300  | 14 911,450  | 30 539,517  | 17 576,140  | 24 929,218  | 27 180,330  | 30 894,791  | 29 415,116  | -         | -         | 211 137,976   |
|       | Torito          | 13 044,483  | 11 493,143  | 13 765,636  | 18 118,451  | 32 977,895  | 28 910,617  | 26 377,228  | 29 418,077  | 28 490,497  | 24 152,235  | -         | -         | 226 748,262   |
|       | Chucás          | 10 983,664  | 8 221,725   | 8 557,497   | 7 190,386   | 20 147,891  | 23 414,435  | 25 045,532  | 24 923,465  | 23 627,070  | 25 123,504  | -         | -         | 177 235,167   |
|       | Subtotal Hidro  | 50 534,715  | 41 719,908  | 48 053,053  | 58 104,517  | 103 340,652 | 90 825,076  | 98 915,233  | 101 561,821 | 98 805,528  | 91 906,959  | -         | -         | 783 767,463   |
|       | P.E. Guanacaste | 25 964,052  | 24 417,089  | 25 254,894  | 16 064,568  | 6 036,027   | 5 580,714   | 13 201,004  | 8 743,337   | 2 144,654   | 6 968,935   | -         | -         | 134 375,274   |
|       | Chiripa         | 31 010,994  | 28 874,438  | 29 600,314  | 21 041,692  | 9 639,659   | 8 455,486   | 18 506,267  | 13 279,742  | 5 319,682   | 13 407,352  | -         | -         | 179 135,627   |
|       | P.E. Orosi      | 30 268,359  | 26 902,039  | 29 468,923  | 20 832,548  | 9 061,913   | 7 697,752   | 18 275,397  | 11 303,967  | 3 213,534   | 9 216,927   | -         | -         | 166 241,359   |
|       | Subtotal Eólico | 87 243,404  | 80 193,566  | 84 324,131  | 57 938,808  | 24 737,599  | 21 733,952  | 49 982,668  | 33 327,046  | 10 677,870  | 29 593,215  | -         | -         | 479 752,260   |
| Total |                 | 137 778,120 | 121 913,474 | 132 377,184 | 116 043,326 | 128 078,252 | 112 559,028 | 148 897,901 | 134 888,867 | 109 483,398 | 121 500,174 | -         | -         | 1 263 519,723 |

**Sistema de Información del S.E.N.  
Resumen Anual 2 0 2 2  
Intercambio Regional MWh**

| Mes          | Producción Nacional  | Norte (Liberia)   |                   |                    | Sur (Progreso)    |                   |                  | Total             |                     |                    | Demanda Nacional    |
|--------------|----------------------|-------------------|-------------------|--------------------|-------------------|-------------------|------------------|-------------------|---------------------|--------------------|---------------------|
|              |                      | Importación       | Exportación       | Diferencia         | Importación       | Exportación       | Diferencia       | Importación       | Exportación         | Diferencia         |                     |
| Enero        | 1 020 350,22         | 34 711,10         | 17 174,55         | 17 536,56          | 3 820,92          | 52 970,70         | -49 149,79       | 38 532,02         | 70 145,25           | -31 613,23         | 988 736,99          |
| Febrero      | 920 224,50           | 43 831,56         | 2 301,14          | 41 530,43          | 5 386,12          | 51 646,93         | -46 260,81       | 49 217,68         | 53 948,06           | -4 730,38          | 915 494,12          |
| Marzo        | 1 039 416,99         | 68 328,59         | 1 283,51          | 67 045,08          | 2 445,47          | 59 486,92         | -57 041,44       | 70 774,06         | 60 770,43           | 10 003,63          | 1 049 420,62        |
| Abril        | 1 002 854,79         | 25 601,62         | 21 381,93         | 4 219,69           | 11 745,79         | 27 172,22         | -15 426,43       | 37 347,41         | 48 554,15           | -11 206,74         | 991 648,05          |
| Mayo         | 1 149 513,94         | 34,47             | 155 852,88        | -155 818,40        | 51 956,17         | 21 060,16         | 30 896,02        | 51 990,65         | 176 913,03          | -124 922,38        | 1 024 591,56        |
| Junio        | 1 093 083,21         | 6,19              | 141 794,83        | -141 788,64        | 40 376,23         | 25 242,58         | 15 133,66        | 40 382,43         | 167 037,41          | -126 654,98        | 966 428,23          |
| Julio        | 1 100 062,65         | 0,10              | 153 361,60        | -153 361,50        | 60 972,85         | 19 422,04         | 41 550,82        | 60 972,95         | 172 783,64          | -111 810,69        | 988 251,97          |
| Agosto       | 1 097 971,62         | 0,39              | 154 029,84        | -154 029,45        | 66 684,74         | 7 671,40          | 59 013,34        | 66 685,13         | 161 701,23          | -95 016,11         | 1 002 955,51        |
| Septiembre   | 1 037 309,19         | 0,00              | 142 638,39        | -142 638,39        | 82 570,82         | 8 519,94          | 74 050,88        | 82 570,82         | 151 158,33          | -68 587,51         | 968 721,68          |
| Octubre      | 1 065 152,35         | 351,28            | 101 813,65        | -101 462,38        | 55 458,49         | 18 421,54         | 37 036,95        | 55 809,77         | 120 235,19          | -64 425,43         | 1 000 726,93        |
| Noviembre    | -                    | 0,00              | 0,00              | 0,00               | 0,00              | 0,00              | 0,00             | 0,00              | 0,00                | 0,00               | -                   |
| Diciembre    | -                    | 0,00              | 0,00              | 0,00               | 0,00              | 0,00              | 0,00             | 0,00              | 0,00                | 0,00               | -                   |
| <b>TOTAL</b> | <b>10 525 939,45</b> | <b>172 865,30</b> | <b>891 632,31</b> | <b>-718 767,01</b> | <b>381 417,62</b> | <b>291 614,42</b> | <b>89 803,20</b> | <b>554 282,92</b> | <b>1 183 246,73</b> | <b>-628 963,81</b> | <b>9 896 975,65</b> |

\*El término Intercambio de energía se refiere a la energía que se da en la transferencia entre dos sistemas de potencia a través de una línea de transmisión (interconector).

Esta energía puede fluir en ambos sentidos (- salida, + entrada).

En el caso del intercambio norte, este corresponde a la suma de los flujos de potencia entre Costa Rica y Nicaragua.

## Sistema Eléctrico Nacional Capacidad Instalada en placa - Octubre 2022

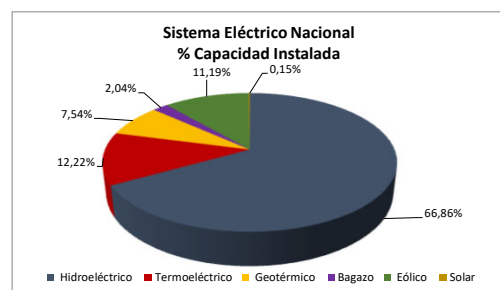
| I.C.E. <sup>3</sup>              | Número Unidades | kW en placa <sup>1</sup> |
|----------------------------------|-----------------|--------------------------|
| <b>ICE HIDRO</b>                 |                 |                          |
| Garita                           | 4               | 134 740                  |
| Río Macho                        | 5               | 135 680                  |
| Cachí                            | 4               | 152 000                  |
| Arenal                           | 3               | 157 399                  |
| Miguel Dengo                     | 3               | 174 012                  |
| Sandillal                        | 2               | 31 977                   |
| Angostura                        | 3               | 172 202                  |
| Peñas Blancas                    | 2               | 38 172                   |
| Cariblanco                       | 2               | 87 941                   |
| Pirris                           | 2               | 140 272                  |
| Toro I                           | 2               | 27 300                   |
| Toro II                          | 2               | 73 040                   |
| Toro III <sup>6</sup>            | 1               | 23 760                   |
| Echandi                          | 1               | 4 696                    |
| Reventazón                       | 5               | 306 868                  |
| <b>Subtotal Hidro</b>            | <b>41</b>       | <b>1 660 058</b>         |
| <b>ICE TÉRMICO</b>               |                 |                          |
| Molín Gas                        | 3               | 108 300                  |
| Molín Gas - C.N.F.L.             | 2               | 90 000                   |
| Guápiles                         | 2               | 14 267                   |
| Orotina                          | 2               | 10 686                   |
| Garabito <sup>2</sup>            | 11              | 202 708                  |
| <b>Subtotal Térmico</b>          | <b>20</b>       | <b>425 962</b>           |
| <b>ICE GEOTÉRMICO</b>            |                 |                          |
| Miravalles I                     | 1               | 55 080                   |
| Miravalles II                    | 1               | 55 080                   |
| Miravalles III                   | 1               | 29 450                   |
| Miravalles V                     | 1               | 10 500                   |
| Boca de Pozo I                   | 1               | 5 000                    |
| Pailas                           | 2               | 51 750                   |
| Las Pailas II <sup>8</sup>       | 1               | 55 800                   |
| <b>Subtotal Geotérmico</b>       | <b>8</b>        | <b>262 660</b>           |
| <b>ICE EÓLICO</b>                |                 |                          |
| Tejona                           | 20              | 13 200                   |
| <b>Subtotal Eólico</b>           | <b>20</b>       | <b>13 200</b>            |
| <b>ICE SOLAR</b>                 |                 |                          |
| Parque Solar Miravalles          | 10              | 1 000                    |
| <b>Subtotal Solar</b>            | <b>10</b>       | <b>1 000</b>             |
| <b>TOTAL ICE (sin contratos)</b> | <b>99</b>       | <b>2 362 880</b>         |

| OTRAS EMPRESAS <sup>4</sup> | Número unidades | kW en placa    |
|-----------------------------|-----------------|----------------|
| <b>Hidro</b>                |                 |                |
| E.S.P.H.                    | 8               | 58 000         |
| J.A.S.E.C.                  | 9               | 47 266         |
| C.N.F.L.                    | 22              | 143 520        |
| Coopelesca                  | 11              | 81 769         |
| Coopeguanacaste             | 4               | 35 000         |
| Conelétricas                | 5               | 46 780         |
| <b>Subtotal Hidro</b>       | <b>59</b>       | <b>412 335</b> |
| <b>Eólico</b>               |                 |                |
| Valle Central (CNFL)        | 17              | 15 300         |
| COOPESANTOS                 | 15              | 12 750         |
| Río Naranjo (Coopegua)      | 3               | 9 000          |
| P.E. Cacao (Coopegua)       | 9               | 21 150         |
| <b>Subtotal Eólico</b>      | <b>44</b>       | <b>58 200</b>  |
| <b>Solar</b>                |                 |                |
| Juanilama                   | 1               | 4 400          |
| <b>Subtotal Solar</b>       | <b>1</b>        | <b>4 400</b>   |
| <b>Total Otras Empresas</b> | <b>104</b>      | <b>474 935</b> |

| Generación Ley 7200 Capítulo I    | Número unidades | kW en placa    | En contrato    |
|-----------------------------------|-----------------|----------------|----------------|
| <b>HIDRO</b>                      |                 |                |                |
| Tapezco                           | 1               | 251            | 186            |
| El Ángel <sup>5</sup>             | 2               | 3 424          | 3 850          |
| El Ángel Ampliación               | 2               | 5 568          | 5 000          |
| Caño Grande                       | 13              | 2 960          | 2 570          |
| Suerkata                          | 1               | 3 000          | 2 700          |
| Matamoras                         | 7               | 4 790          | 4 828          |
| Río Lajas                         | 2               | 11 000         | 10 000         |
| El Embalse                        | 2               | 2 000          | 1 500          |
| Doña Julia                        | 2               | 16 470         | 17 400         |
| Caño Grande III                   | 1               | 3 375          | 3 280          |
| Santa Rufina <sup>7</sup>         |                 |                |                |
| Vara Blanca                       | 1               | 2 677          | 2 500          |
| Rebeca I                          | 1               | 113            | 85             |
| <b>Subtotal Hidro</b>             | <b>35</b>       | <b>55 628</b>  | <b>53 899</b>  |
| <b>EÓLICO</b>                     |                 |                |                |
| Plantas Eólicas                   |                 |                |                |
| Aeroenergía                       | 9               | 6 750          | 6 400          |
| Tilawind                          | 7               | 21 420         | 19 550         |
| Movasa                            | 32              | 19 200         | 20 000         |
| Vientos del Este                  | 4               | 12 240         | 9 000          |
| Mogote                            | 7               | 21 420         | 20 000         |
| Altamira                          | 10              | 20 700         | 20 000         |
| Campos Azules                     | 10              | 20 700         | 20 000         |
| Vientos de Miramar                | 10              | 20 700         | 20 000         |
| Vientos de La Perla               | 10              | 20 700         | 20 000         |
| <b>Subtotal Eólico</b>            | <b>99</b>       | <b>163 830</b> | <b>154 950</b> |
| <b>BAGAZO</b>                     |                 |                |                |
| El Viejo                          | 1               | 32 500         | 18 000         |
| Taboqa                            | 3               | 38 500         | 19 800         |
| <b>Subtotal Bagazo</b>            | <b>4</b>        | <b>71 000</b>  | <b>37 800</b>  |
| <b>Total Ley 7200, Capítulo I</b> | <b>138</b>      | <b>290 458</b> | <b>246 649</b> |

| Generación Ley 7200, Capítulo II   | Número unidades | kW en Placa    | kW Contrato    |
|------------------------------------|-----------------|----------------|----------------|
| <b>Hidro</b>                       |                 |                |                |
| El General                         | 2               | 40 000         | 39 000         |
| La Joya                            | 3               | 50 681         | 50 000         |
| Torito                             | 2               | 60 000         | 50 000         |
| Chucús                             | 2               | 51 850         | 50 000         |
| <b>Subtotal Hidro</b>              | <b>9</b>        | <b>202 531</b> | <b>189 000</b> |
| <b>Eólico</b>                      |                 |                |                |
| P.E. Guanacaste                    | 55              | 52 250         | 49 500         |
| Chiripa                            | 33              | 50 985         | 49 500         |
| Orosí                              | 25              | 51 750         | 50 000         |
| <b>Subtotal Eólico</b>             | <b>113</b>      | <b>154 985</b> | <b>149 000</b> |
| <b>Total Ley 7200, Capítulo II</b> | <b>122</b>      | <b>357 516</b> | <b>338 000</b> |

| Sistema Eléctrico Nacional<br>Instalado en Placa |                  |            |               |
|--------------------------------------------------|------------------|------------|---------------|
| I C E                                            | kW               | Unidades   | %             |
| Hidro                                            | 1 660 058        | 41         | 70,26%        |
| Térmico                                          | 425 962          | 20         | 18,03%        |
| Geotérmico                                       | 262 660          | 8          | 11,12%        |
| Eólico                                           | 13 200           | 20         | 0,56%         |
| Solar                                            | 1 000            | 10         | 0,04%         |
| <b>Total ICE</b>                                 | <b>2 362 880</b> | <b>99</b>  | <b>67,79%</b> |
| <b>Otras Empresas</b>                            |                  |            |               |
| Hidro                                            | 412 335          | 59         | 86,82%        |
| Biogás                                           |                  |            |               |
| Eólico                                           | 58 200           | 44         | 12,25%        |
| Solar                                            | 4 400            | 1          | 0,93%         |
| <b>Total Otras Empresas</b>                      | <b>474 935</b>   | <b>104</b> | <b>13,62%</b> |
| <b>Ley 7200, Capítulo I</b>                      |                  |            |               |
| Hidro                                            | 55 628           | 35         | 19,15%        |
| Eólico                                           | 163 830          | 99         | 56,40%        |
| Biomasa                                          | 71 000           | 4          | 24,44%        |
| <b>Total Ley 7200, Capítulo I</b>                | <b>290 458</b>   | <b>138</b> | <b>8,33%</b>  |
| <b>Ley 7200, Capítulo II</b>                     |                  |            |               |
| Hidro                                            | 202 531          | 9          | 56,65%        |
| Eólico                                           | 154 985          | 113        | 43,35%        |
| <b>Total Ley 7200, Capítulo II</b>               | <b>357 516</b>   | <b>122</b> | <b>10,26%</b> |
| <b>Total instalado</b>                           | <b>3 485 789</b> | <b>463</b> |               |



| Resumen<br>kW<br>Costa Rica |                  |                |  |
|-----------------------------|------------------|----------------|--|
| Hidroeléctrico              | 2 330 553        | 66,86%         |  |
| Termoelectrico              | 425 962          | 12,22%         |  |
| Geotermico                  | 262 660          | 7,54%          |  |
| Bagazo                      | 71 000           | 2,04%          |  |
| Eólico                      | 390 215          | 11,19%         |  |
| Solar                       | 5 400            | 0,15%          |  |
| <b>Total</b>                | <b>3 485 789</b> | <b>100,00%</b> |  |

### Consideraciones:

1. **Placa Generador** - Dato de diseño del generador utilizado en la unidad, no necesariamente corresponde con la potencia del conjunto turbina-generador.
2. Para el caso de Garabito se debe planificar con solo 10 unidades ya que la onceava unidad es un respaldo de potencia.
3. Datos suministrados por el Negocio de Generación del ICE.
4. Potencia en placa confirmada por las distribuidoras en Febrero de 2021.
5. La Planta El Ángel se mantiene dentro del cuadro a pesar de que la fecha de finalización de contrato ya se dio (19/11/2021), debido a que esta empresa presentó una medida cautelar que aún no se ha resuelto, que le impide al ICE proceder a la desconexión de la planta.
6. Toro III tiene una capacidad en placa de 47 520 kW, la planta opera en un convenio entre JASEC y el ICE, por lo que para efectos de este cuadro, la potencia de placa se distribuye entre ambas empresas en un 50% para cada una.
7. El 7 de mayo del 2022 vence el contrato de la Planta Santa Rufina y sale de operación (336 kW).
8. La División de Generación actualiza el dato de potencia de Las Pailas II el 3 de junio de 2022.