



DATOS RELEVANTES DEL MERCADO ELÉCTRICO PANAMEÑO

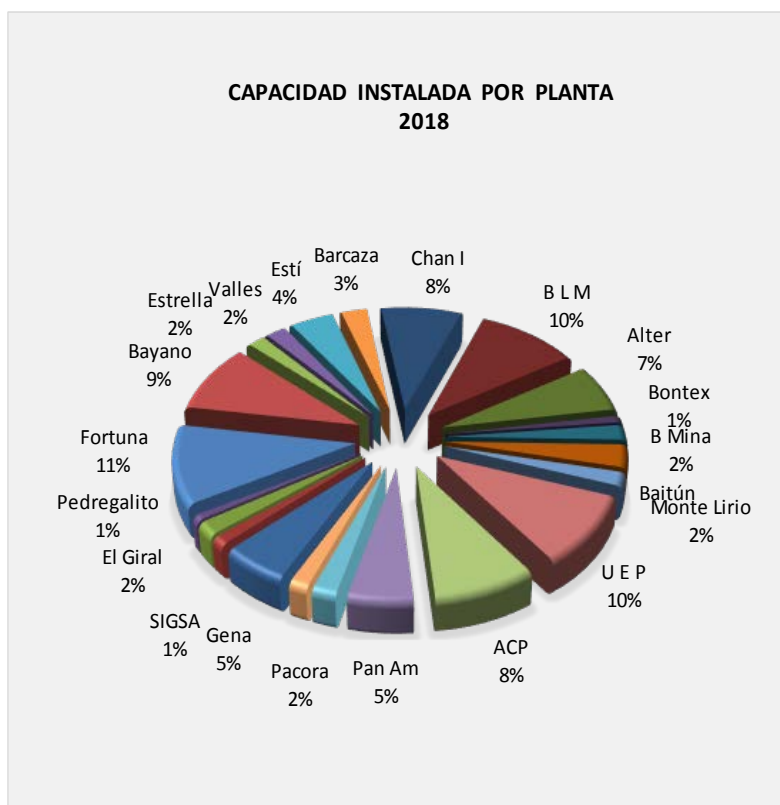
NOVIEMBRE DE 2018

CONTENIDO

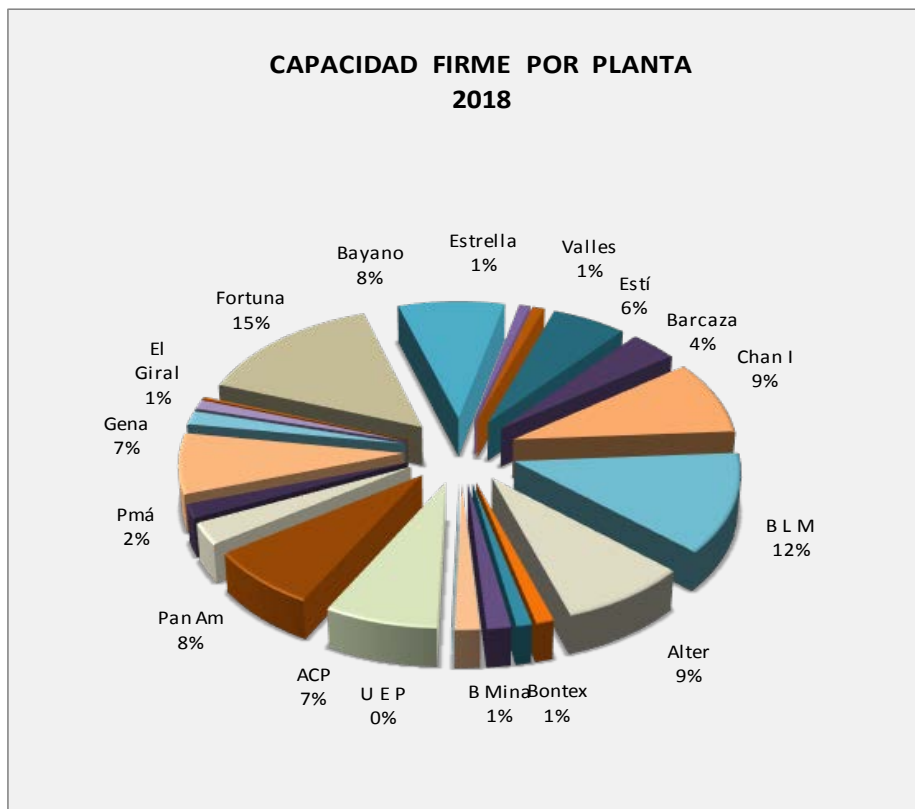
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I. CAPACIDAD INSTALADA Y CAPACIDAD FIRME POR AGENTE Y POR PLANTA

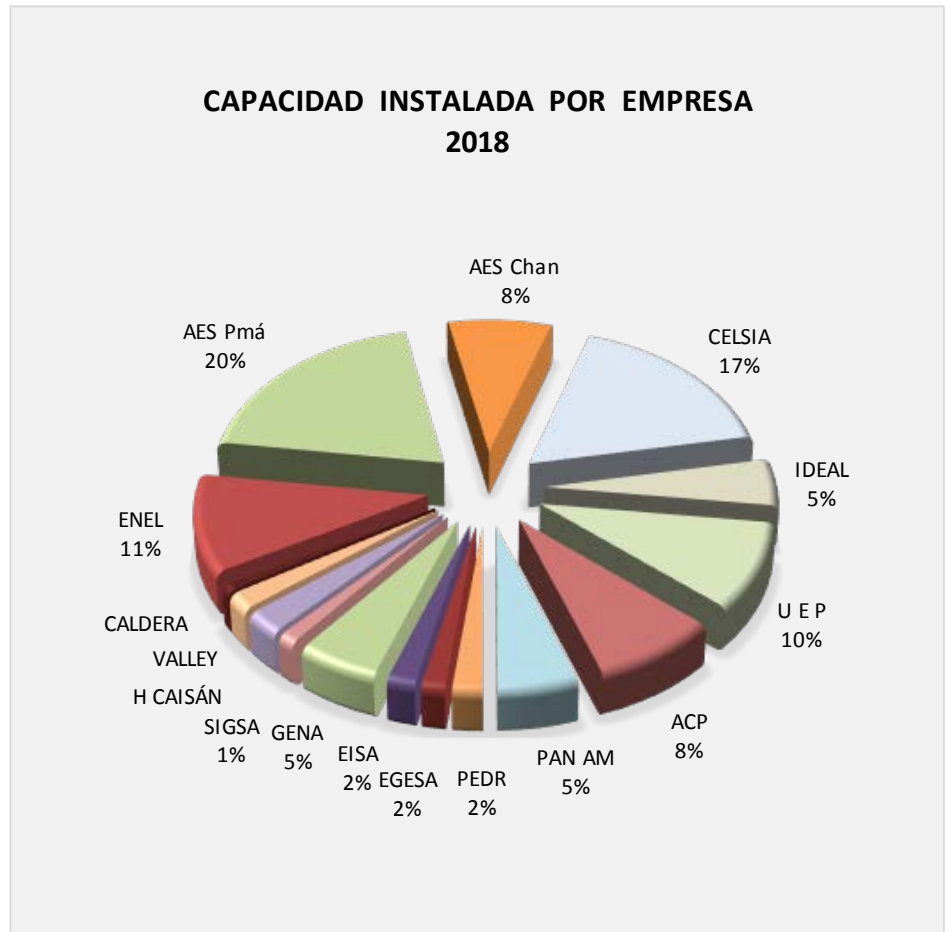
| Empresa | Planta | Capacidad Instalada | Capacidad Firme |
|--------------|-------------|---------------------|-----------------|
| | | MW | MW |
| ENEL | Fortuna | 300.00 | 284.00 |
| AES Pmá | Bayano | 260.00 | 160.12 |
| AES Pmá | Estrella | 47.20 | 16.13 |
| AES Pmá | Valles | 54.76 | 17.63 |
| AES Pmá | Estí | 120.00 | 112.67 |
| AES Pmá | Barcaza | 72.00 | 72.00 |
| AES Chan | Chan I | 222.17 | 175.33 |
| CELSIA | B L M | 280.00 | 240.50 |
| CELSIA | Alter | 179.42 | 164.21 |
| CELSIA | Bontex | 25.41 | 23.04 |
| IDEAL | B Mina | 56.80 | 20.07 |
| IDEAL | Baitún | 85.90 | 31.09 |
| EISA | Monte Lirio | 51.60 | 32.38 |
| U E P | U E P | 270.00 | 0.00 |
| ACP | ACP | 231.54 | 144.50 |
| PAN AM | Pan Am | 147.00 | 145.00 |
| PEDR POWER | Pacora | 55.35 | 53.00 |
| GENA | Gena | 150.00 | 144.50 |
| SIGSA | SIGSA | 32.18 | 32.00 |
| VALLEY | El Giral | 50.85 | 22.00 |
| PEDRGLITO | Pedregalito | 20.00 | 5.25 |
| R CHICO | Río Chico | 10.00 | 3.22 |
| H CAISÁN | El Alto | 69.48 | 22.14 |
| A VALLE | Alto valle | 15.50 | 3.06 |
| CALDERA | Mendre 1 | 19.75 | 3.90 |
| FOUNTAIN | Bajo Frío | 57.90 | 19.42 |
| H ECO TERIBE | Bonyic | 31.80 | 20.00 |
| KANAN | Kanan | 92.50 | 90.00 |
| JINRO | Jinro | 57.80 | 55.00 |
| OTROS | Otros | 213.49 | 39.48 |
| TOTAL | | 3,280.40 | 2,151.64 |



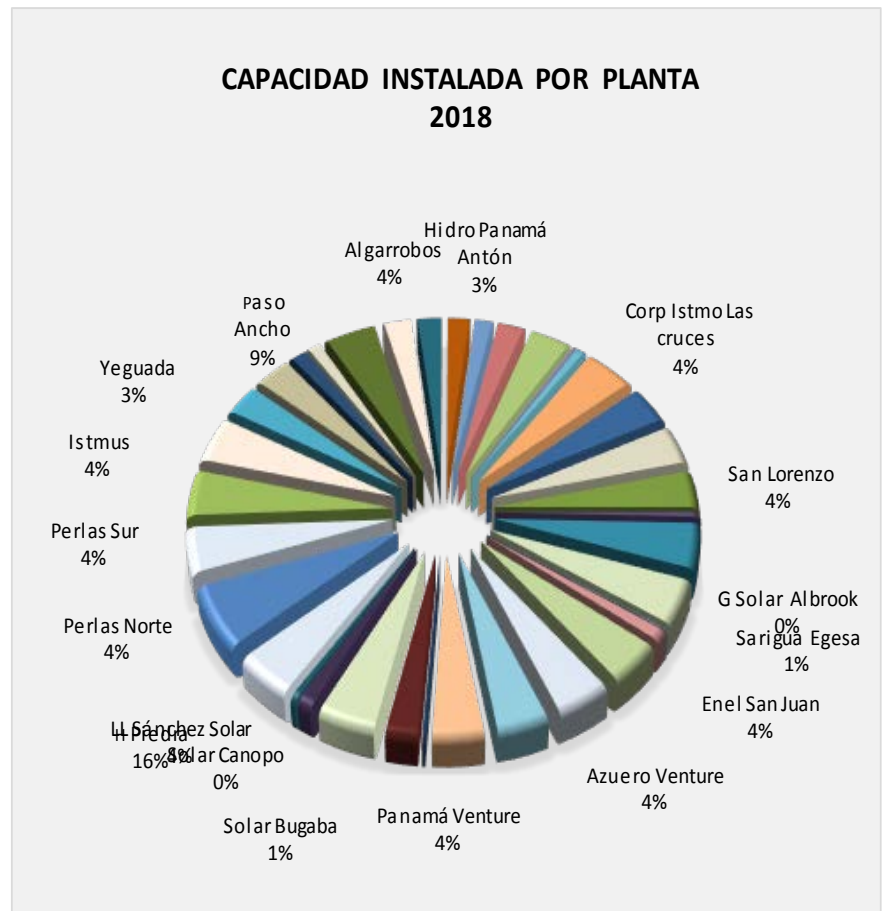
| Empresa | Capacidad Instalada MW | Capacidad Firme MW |
|--------------|---------------------------|-----------------------|
| ENEL | 300.00 | 284.00 |
| AES Pmá | 553.96 | 378.55 |
| AES Chan | 222.17 | 175.33 |
| CELSIA | 484.76 | 427.75 |
| IDEAL | 142.70 | 51.16 |
| U E P | 270.00 | 0.00 |
| ACP | 231.54 | 144.50 |
| PAN AM | 147.00 | 145.00 |
| PEDR | 55.35 | 53.00 |
| EISA | 51.60 | 32.38 |
| GENA | 150.00 | 144.50 |
| SIGSA | 32.18 | 32.00 |
| H CAISÁN | 69.48 | 22.14 |
| VALLEY | 50.85 | 22.00 |
| CALDERA | 19.75 | 3.90 |
| PEDREGALITO | 20.00 | 5.25 |
| R CHICO | 10.00 | 3.22 |
| A VALLE | 15.50 | 3.06 |
| FOUNTAIN | 57.90 | 19.42 |
| H ECO TERIBE | 31.80 | 20.00 |
| KANAN | 92.5 | 90.00 |
| JINRO | 57.87 | 55.00 |
| OTROS | 213.49 | 39.48 |
| TOTAL | 3,280.40 | 2,151.64 |



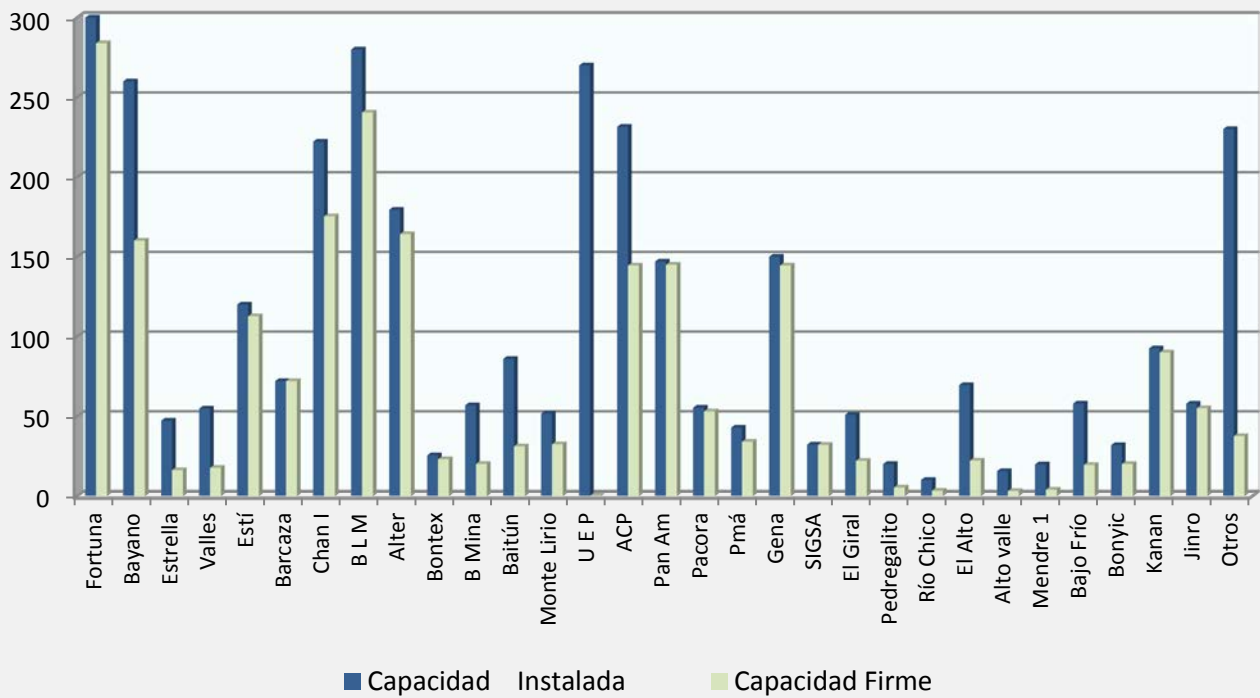
| OTROS | Capacidad Instalada | Capacidad Firme |
|-------------------------|---------------------|-----------------|
| | MW | MW |
| H Piedra RP 490 | 14.00 | 3.00 |
| Perlas Norte | 10.00 | 2.46 |
| Perlas Sur | 10.00 | 2.46 |
| Istmus | 10.00 | 2.49 |
| Paso Ancho | 6.78 | 4.30 |
| Yeguada | 7.00 | 3.00 |
| Dolega | 3.12 | 1.10 |
| Macho de Monte | 2.50 | 0.80 |
| Algarrobos | 9.86 | 2.41 |
| Hidro Ibérica El Fraile | 5.30 | 5.00 |
| Saltos del Francolí | 4.74 | 0.91 |
| Hidro Panamá Antón | 4.30 | 0.74 |
| Hidro Boquerón Macano | 3.50 | 0.90 |
| Bugaba 1 Emnadesa | 5.14 | 0.50 |
| Mendre 2 Egeistmo | 7.80 | 2.50 |
| Hidro Candela Eleta | 0.53 | 0.13 |
| Grupo Melo | 1.57 | 1.57 |
| Corp Istmo Las cruces | 9.70 | 3.21 |
| San Lorenzo | 8.12 | 2.00 |
| Coclé Solar Azucarera | 0.96 | 0.00 |
| Divisa Solar | 9.99 | 0.00 |
| Farallón 2 | 9.96 | 0.00 |
| G Solar Albroom | 0.10 | 0.00 |
| Sarigua Egesa | 2.40 | 0.00 |
| Enel San Juan | 9.30 | 0.00 |
| Azuero Venture | 9.50 | 0.00 |
| Coclé Venture | 8.90 | 0.00 |
| Panamá Venture | 8.90 | 0.00 |
| El Fraile Solar | 0.48 | 0.00 |
| Solar Uno | 5.50 | 0.00 |
| Solar Istmo | 9.99 | 0.00 |
| Solar Bugaba | 2.56 | 0.00 |
| Solar Canopo | 1.00 | 0.00 |
| LL Sánchez Solar | 9.99 | 0.00 |
| TOTAL | 213.49 | 39.48 |



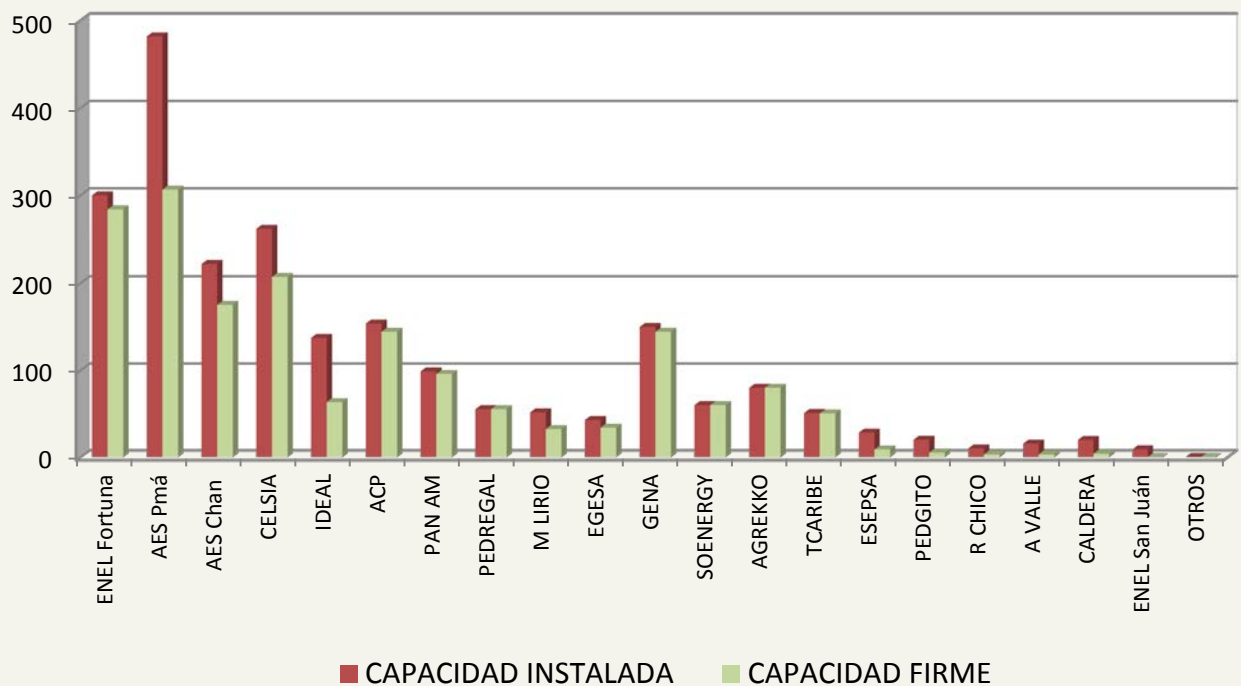
| OTROS | Capacidad Instalada | Capacidad Firme |
|-------------------------|---------------------|-----------------|
| | MW | MW |
| H Piedra RP 490 | 14.00 | 3.00 |
| Perlas Norte | 10.00 | 2.46 |
| Perlas Sur | 10.00 | 2.46 |
| Istmus | 10.00 | 2.49 |
| Paso Ancho | 6.78 | 4.30 |
| Yeguada | 7.00 | 3.00 |
| Dolega | 3.12 | 1.10 |
| Macho de Monte | 2.50 | 0.80 |
| Algarrobos | 9.86 | 2.41 |
| Hidro Ibérica El Fraile | 5.30 | 5.00 |
| Salto del Francolí | 4.74 | 0.91 |
| Hidro Panamá Antón | 4.30 | 0.74 |
| Hidro Boquerón Macano | 3.50 | 0.90 |
| Bugaba 1 Emnadesa | 5.14 | 0.50 |
| Mendre 2 Egeistmo | 7.80 | 2.50 |
| Hidro Candela Eleta | 0.53 | 0.13 |
| Grupo Melo | 1.57 | 1.57 |
| Corp Istmo Las cruces | 9.70 | 3.21 |
| Urbalia | 8.10 | 8.00 |
| PSZ 1 El Espinal | 8.50 | 8.00 |
| San Lorenzo | 8.12 | 2.00 |
| Coclé Solar Azucarera | 0.96 | 0.00 |
| Divisa Solar | 9.99 | 0.00 |
| Farallón 2 | 9.96 | 0.00 |
| G Solar Albrook | 0.10 | 0.00 |
| Sarigua Egesa | 2.40 | 0.00 |
| Enel San Juan | 9.30 | 0.00 |
| Azuero Venture | 9.50 | 0.00 |
| Coclé Venture | 8.90 | 0.00 |
| Panamá Venture | 8.90 | 0.00 |
| El Fraile Solar | 0.48 | 0.00 |
| Solar Uno | 5.50 | 0.00 |
| Solar Istmo | 9.99 | 0.00 |
| Solar Bugaba | 2.56 | 0.00 |
| Solar Canopo | 1.00 | 0.00 |
| LL Sánchez Solar | 9.99 | 0.00 |
| TOTAL | 230.09 | 37.48 |



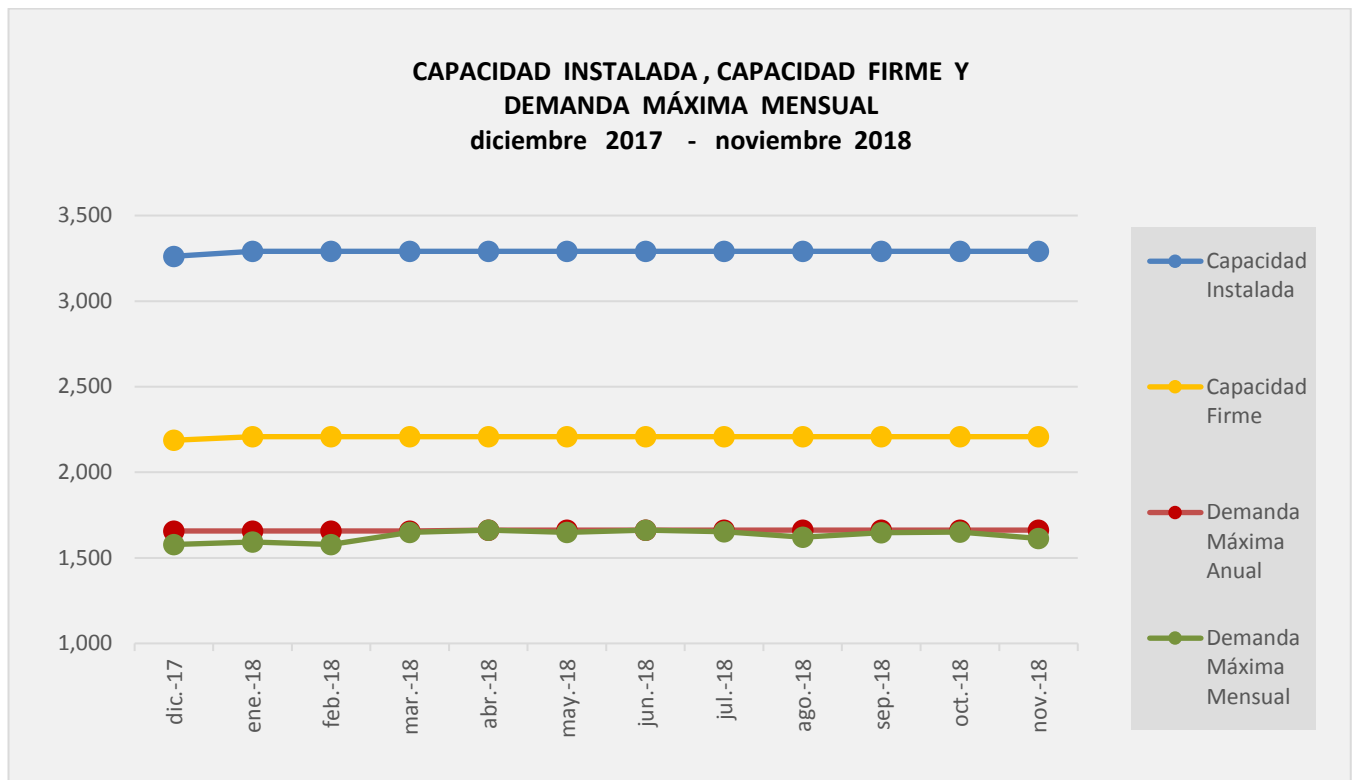
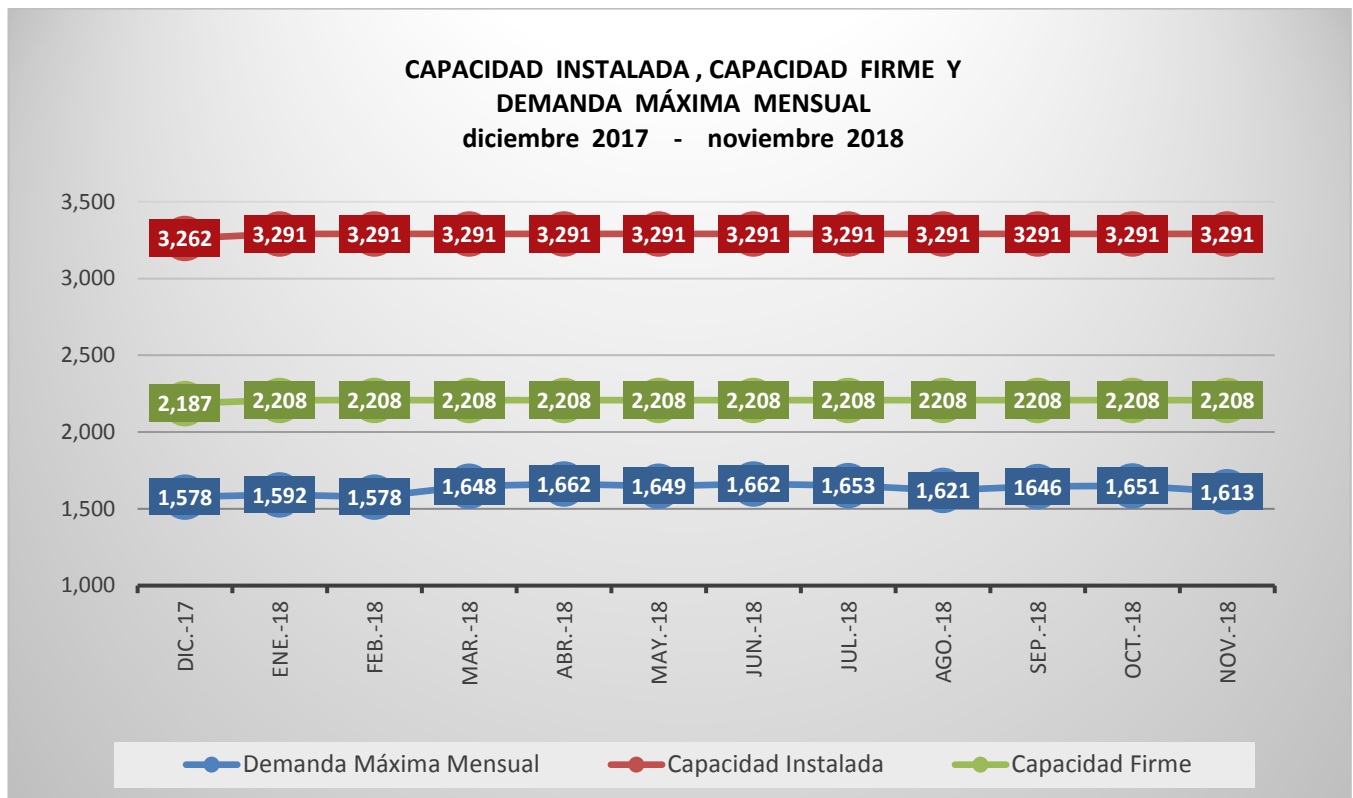
CAPACIDAD INSTALADA Y CAPACIDAD FIRME POR PLANTA (MW) 2018



CAPACIDAD INSTALADA Y CAPACIDAD FIRME POR EMPRESA (MW) 2018

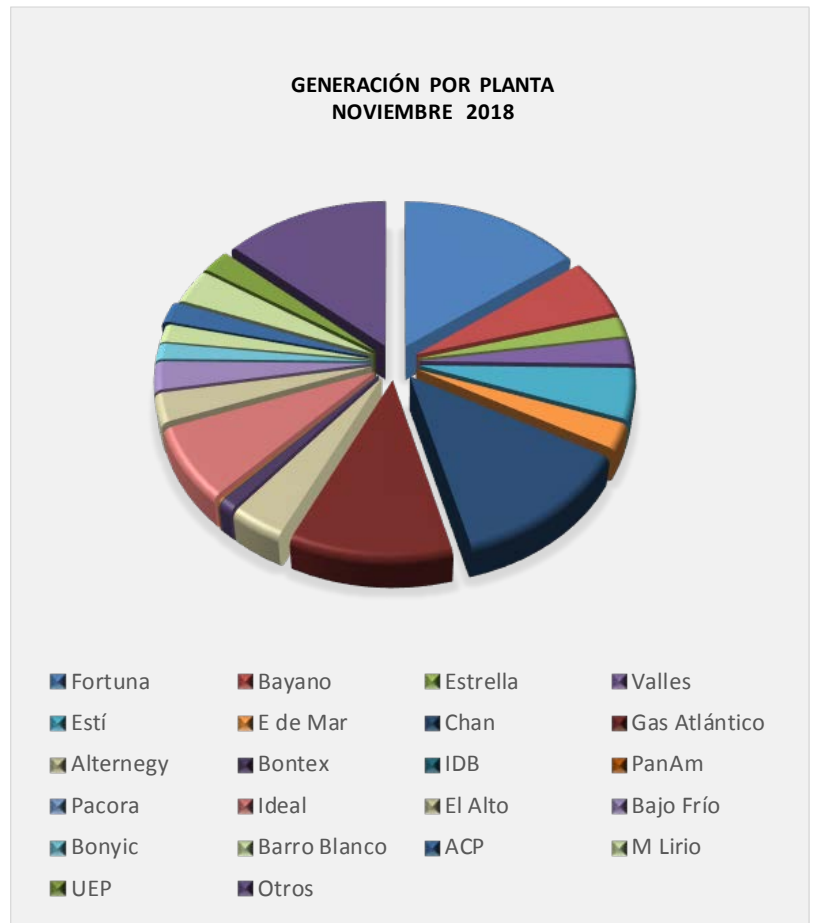


II. CAPACIDAD INSTALADA Y FIRME VS DEMANDA MÁXIMA MENSUAL



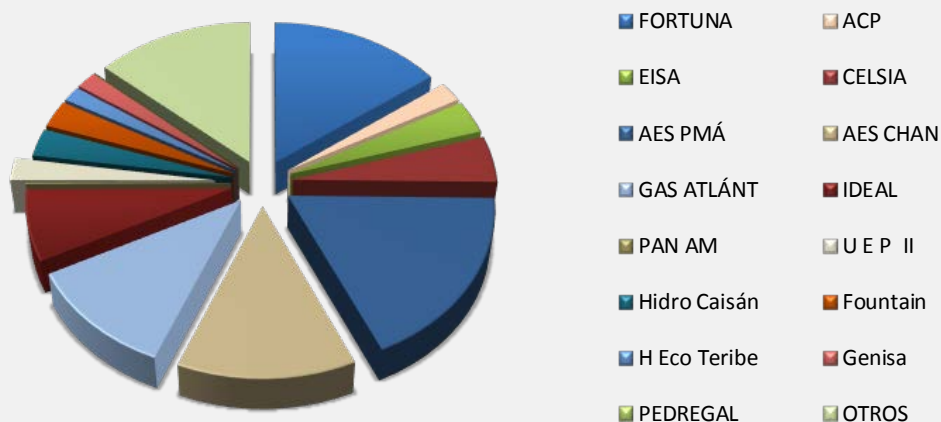
III. GENERACIÓN POR EMPRESA Y PLANTA

| Empresa | Planta | MWh |
|--------------|---------------|-------------------|
| ENEL | Fortuna | 129,103.39 |
| AES Pmá | Bayano | 50,060.28 |
| AES Pmá | Estrella | 17,601.99 |
| AES Pmá | Valles | 22,273.43 |
| AES Pmá | Estí | 43,733.39 |
| AES Pmá | E de Mar | 22,472.81 |
| AES Chan | Chan | 112,201.05 |
| AES Colón | Gas Atlántico | 98,391.42 |
| CELSIA | Alternegy | 32,730.82 |
| CELSIA | Bontex | 8,905.92 |
| CELSIA | IDB | 130.95 |
| PAN AM | PanAm | 1,250.48 |
| PEDREGAL | Pacora | 0.00 |
| IDEAL | Ideal | 63,720.70 |
| Hidro Caisán | El Alto | 25,052.98 |
| Fountain | Bajo Frío | 24,424.92 |
| H Eco Teribe | Bonyic | 13,722.80 |
| Genisa | Barro Blanco | 15,562.88 |
| ACP | ACP | 17,949.36 |
| EISA | M Lirio | 29,825.63 |
| UEP | UEP | 19,895.10 |
| OTROS | Otros | 117,834.62 |
| | TOTAL | 866,844.89 |



| Empresa | MWh | |
|--------------|-------------------|----------------|
| FORTUNA | 129,103.39 | 14.89% |
| ACP | 17,949.36 | 2.07% |
| EISA | 29,825.63 | 3.44% |
| CELSIA | 41,767.69 | 4.82% |
| AES PMÁ | 156,141.88 | 18.01% |
| AES CHAN | 112,201.05 | 12.94% |
| GAS ATLÁNT | 98,391.42 | 11.35% |
| IDEAL | 63,720.70 | 7.35% |
| PAN AM | 1,250.48 | 0.14% |
| U E P II | 19,895.10 | 2.30% |
| Hidro Caisán | 25,052.98 | 2.89% |
| Fountain | 24,424.92 | 2.82% |
| H Eco Teribe | 13,722.80 | 1.58% |
| Genisa | 15,562.88 | 1.80% |
| PEDREGAL | 0.00 | 0.00% |
| OTROS | 117,834.62 | 13.59% |
| TOTAL | 866,844.89 | 100.00% |

GENERACIÓN POR EMPRESA
NOVIEMBRE 2018

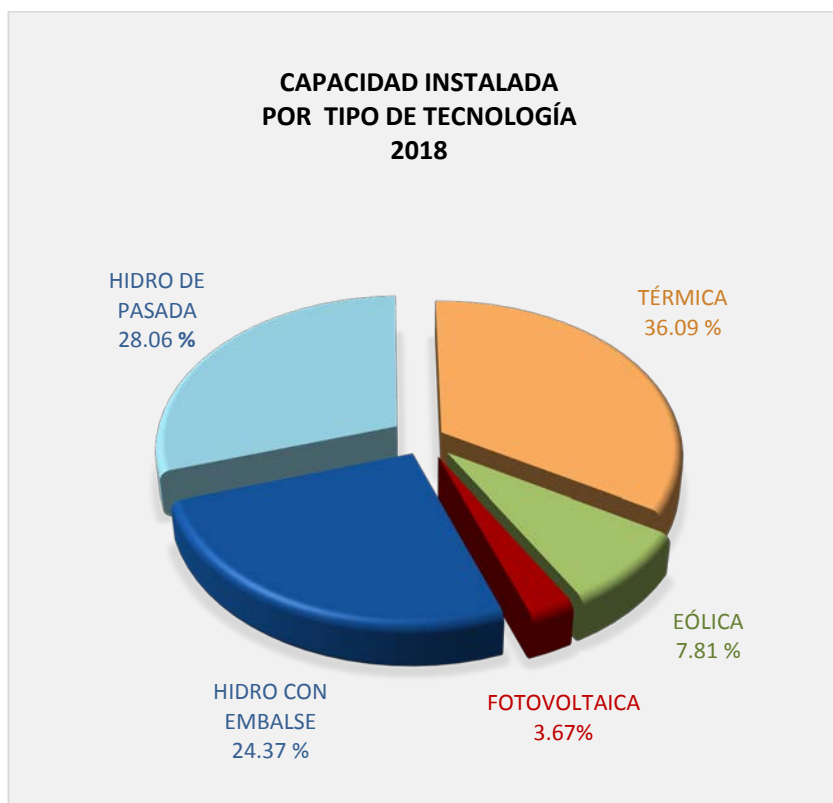


| OTROS | | |
|------------------|---------------|------------|
| Empresa | Planta | MWh |
| Alto valle | A Valle | 4,381.24 |
| Café Eleta | Caldeco | 7,064.90 |
| San Lorenzo | S Lorenzo | 4,553.92 |
| Pedregalito | Pedregalito | 7,601.31 |
| Río Chico | Río Chico | 4,668.72 |
| Paso Ancho | P Ancho | 2,636.07 |
| Istmus | Concepción | 5,720.76 |
| Perlas Norte | P Norte | 5,830.68 |
| Perlas Sur | P Sur | 5,909.41 |
| Saltos Francolí | Planetas | 2,358.24 |
| Hidro Ibérica | El Fraile | 3,624.48 |
| Emnadesa | Bugaba | 4,204.37 |
| Hidro Boquerón | Macano | 2,671.26 |
| Electrogen Istmo | Mendre 2 | 2,925.71 |
| Esepsa | Yeguada | 3,913.30 |
| Esepsa | Dolega | 1,186.50 |
| Esepsa | M Monte | 979.67 |
| Esepsa | Algarrobos | 3,361.43 |
| Hidro Panamá | Antón | 1,765.23 |
| Hid Candela | Hid Candela | 164.14 |
| Hidro Piedra | RP 490 | 11,811.48 |
| Corp Isrmo | Corp Isrmo | 6,801.52 |
| Urbalia | Urbalia | 1,861.69 |
| Kanan | Kanan | 7,363.65 |
| Jinro | Jinro | 1,570.30 |

| OTROS | | |
|------------------|------------------|-------------------|
| Empresa | Planta | MWh |
| Bajos del Totuma | Bajos Totuma | 1,720.07 |
| EGESA | Sarigua | 53.77 |
| Energyst | Energyst | 0.00 |
| Feisa | Feisa | 3,000.46 |
| P S Z 1 | P S Z 1 | 970.65 |
| El Fraile Solar | El Fraile | 50.41 |
| Solar Uno | Solar Uno | 478.14 |
| Solar Istmo | Solar Istmo | 540.97 |
| Bugaba Solar | Bugaba Solar | 177.16 |
| Canopo Solar | Canopo Solar | 44.62 |
| Azuero Venture | Azuero Venture | 1,486.61 |
| Coclé Venture | Coclé Venture | 1,427.18 |
| Panamá Venture | Pmá Venture | 1,353.07 |
| G Solar | Albrook | 7.65 |
| Enel | San Juan | 1,271.29 |
| Azucarera | Coclé Solar | 105.60 |
| Llano Sánchez | Ll. Sánchez | 3,610.82 |
| Farallón Solar 2 | Farallón 2 | 653.90 |
| Divisa Solar | D Solar | 931.62 |
| Valley Rise | El Giral | 0.00 |
| Tecnisol | Tecnisol 1 2 3 4 | 5,048.08 |
| C Solar | C Solar | 96.55 |
| Estrella Solar | Estrella Solar | 671.68 |
| TOTAL | | 117,834.62 |

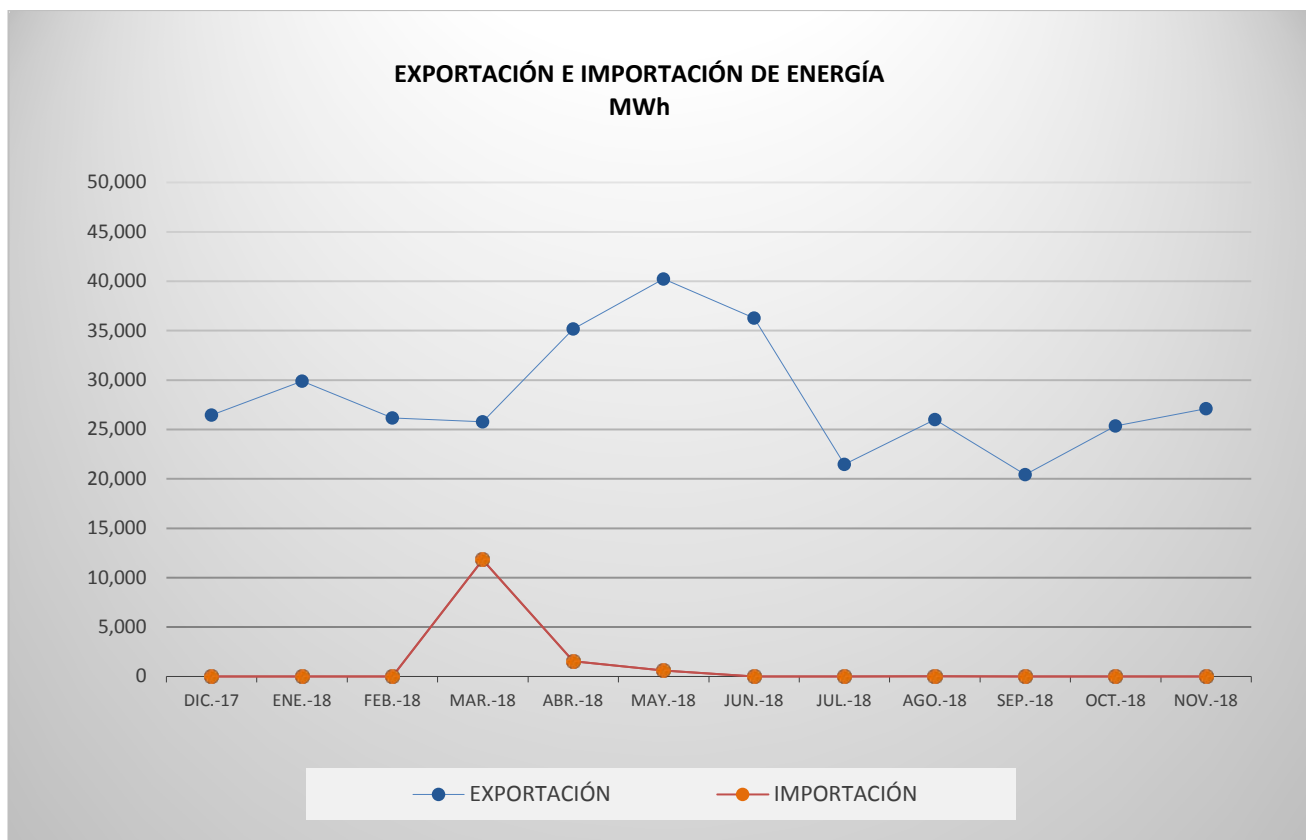
IV. CAPACIDAD INSTALADA POR TIPO DE TECNOLOGÍA

| TECNOLOGÍA | MW | % |
|-------------------|----------|--------|
| HIDRO CON EMBALSE | 842.17 | 24.37% |
| HIDRO DE PASADA | 969.48 | 28.06% |
| TÉRMICA | 1,247.12 | 36.09% |
| EÓLICA | 270 | 7.81% |
| FOTOVOLTAICA | 126.78 | 3.67% |



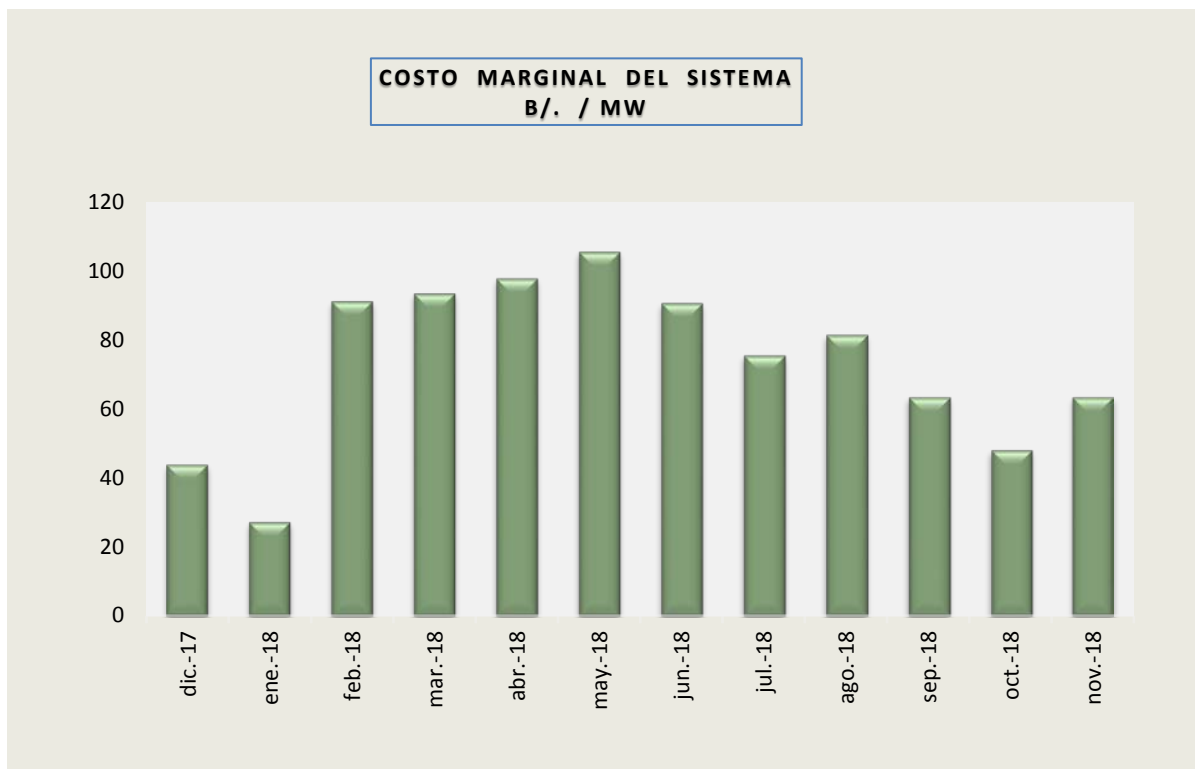
V. IMPORTACIONES Y EXPORTACIONES

| | EXPORTACIÓN | IMPORTACIÓN |
|--------|-------------|-------------|
| | MWh | MWh |
| dic-17 | 26,449.76 | 0.00 |
| ene-18 | 29,888.73 | 0.00 |
| feb-18 | 26,173.80 | 0.00 |
| mar-18 | 25,791.77 | 11,806.13 |
| abr-18 | 35,157.17 | 1,551.19 |
| may-18 | 40,237.30 | 609.35 |
| jun-18 | 36,278.21 | 0.00 |
| jul-18 | 21,482.72 | 0.00 |
| ago-18 | 26,013.52 | 2.44 |
| sep-18 | 20,429.48 | 0.00 |
| oct-18 | 25,370.50 | 0.00 |
| nov-18 | 27,117.69 | 0.00 |



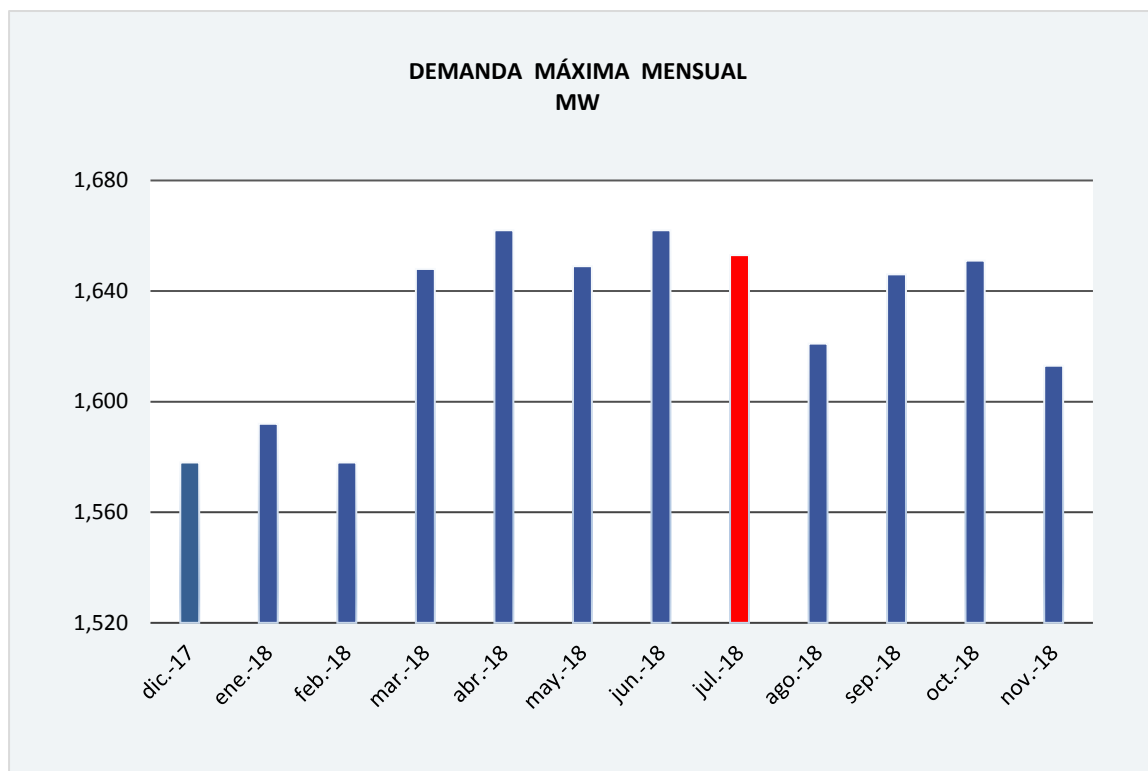
VI. COSTO MARGINAL DEL SISTEMA

| mes | C M S B/. / MWh |
|--------|--------------------|
| dic-17 | 43.88 |
| ene-18 | 27.24 |
| feb-18 | 91.10 |
| mar-18 | 93.37 |
| abr-18 | 97.71 |
| may-18 | 105.47 |
| jun-18 | 90.57 |
| jul-18 | 75.48 |
| ago-18 | 81.42 |
| sep-18 | 63.4 |
| oct-18 | 48.06 |
| nov-18 | 63.40 |



VII. DEMANDA MÁXIMA MENSUAL Y ANUAL

| mes | Demanda Máxima |
|---------------|-------------------|
| dic-17 | 1,578 |
| ene-18 | 1,592 |
| feb-18 | 1,578 |
| mar-18 | 1,648 |
| abr-18 | 1,662 |
| may-18 | 1,649 |
| jun-18 | 1,662 |
| jul-18 | 1,653 |
| ago-18 | 1,621 |
| sep-18 | 1,646 |
| oct-18 | 1,651 |
| nov-18 | 1,613 |



VIII. COSTO DE ENERGÍA Y POTENCIA HIDRO, TÉRMICO Y EÓLICO

| NOVIEMBRE | EDEMET | | | | ENSA | | | |
|----------------------|---------------|---------------|----------------|---------------|-----------|---------------|----------------|---------------|
| | HIDRO | TÉRMICA | EÓLICA Y SOLAR | TOTAL | HIDRO | TÉRMICA | EÓLICA Y SOLAR | TOTAL |
| COSTO POTENCIA (B./) | 8,914,728.05 | 12,188,420.45 | 0.00 | 21,103,148.50 | 194.92 | 7,225,779.75 | 0.00 | 7,225,974.66 |
| COSTO ENERGÍA (B./) | 18,728,196.16 | 10,999,205.30 | 524,146.12 | 29,727,401.47 | 62,239.91 | 13,812,078.80 | 133,766.03 | 14,008,084.73 |
| COSTO TOTAL (B./) | 27,642,924.21 | 23,187,625.75 | 524,146.12 | 50,830,549.97 | 62,434.83 | 21,037,858.54 | 133,766.03 | 21,234,059.39 |
| ENERGÍA (MWh) | 297,508.02 | 130,081.77 | 5,235.36 | 427,589.79 | 557.51 | 129,350.16 | 1,378.04 | 131,285.71 |
| MONÓMICO (B./MWh) | 92.91 | 178.25 | 100.12 | 118.88 | 111.99 | 162.64 | 97.07 | 161.74 |

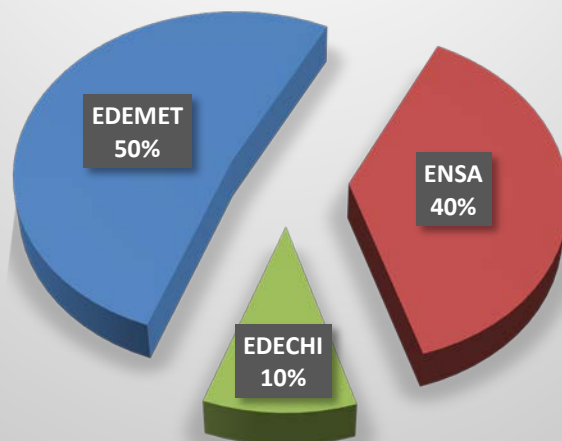
| NOVIEMBRE | EDECHI | | | | TOTAL | | | |
|----------------------|--------------|--------------|----------------|--------------|---------------|---------------|----------------|---------------|
| | HIDRO | TÉRMICA | EÓLICA Y SOLAR | TOTAL | HIDRO | TÉRMICA | EÓLICA Y SOLAR | TOTAL |
| COSTO POTENCIA (B./) | 820,009.99 | 1,957,989.46 | 0.00 | 2,777,999.45 | 9,734,932.96 | 21,372,189.66 | 0.00 | 31,107,122.61 |
| COSTO ENERGÍA (B./) | 3,718,389.25 | 2,218,435.90 | 162,939.54 | 5,936,825.15 | 22,508,825.32 | 27,029,720.00 | 820,851.69 | 50,359,397.01 |
| COSTO TOTAL (B./) | 4,538,399.24 | 4,176,425.36 | 162,939.54 | 8,714,824.60 | 32,243,758.28 | 48,401,909.65 | 820,851.69 | 81,466,519.62 |
| ENERGÍA (MWh) | 50,089.13 | 21,982.79 | 1,364.55 | 72,071.92 | 348,154.66 | 281,414.72 | 7,977.96 | 637,547.34 |
| MONÓMICO (B./MWh) | 90.61 | 189.99 | 119.41 | 120.92 | 92.61 | 171.99 | 102.89 | 127.78 |

IX. CLIENTES, VENTAS E INGRESOS POR DISTRIBUIDORA

| NOVIEMBRE | NÚMERO DE CLIENTES | VENTAS (kWh) | INGRESOS US \$ |
|------------------|---------------------------|-----------------------|-----------------------|
| EDEMET | 489,208.00 | 358,271,795.00 | 58,664,597.00 |
| ENSA | 455,178.00 | 260,920,119.00 | 48,416,316.25 |
| EDECHI | 156,375.00 | 71,047,702.00 | 13,284,854.00 |
| TOTAL | 1,100,761.00 | 690,239,616.00 | 120,365,767.25 |



**VENTAS DE ENERGÍA POR EMPRESA
NOVIEMBRE 2018**



**INGRESOS POR EMPRESA
NOVIEMBRE 2018**

