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Precipitaciones medias

Los datos brindados por Senamhi fueron las precipitaciones mensuales medias.

Estación Milloc 1986 - 2014

| Año | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC | ANUAL |
|------|-------|-------|-------|-------|------|------|------|------|-------|-------|-------|-------|--------|
| 1986 | 168.5 | 165.1 | 174.7 | 87.2 | 40.1 | 0.4 | 26.4 | 12.2 | 31.0 | 24.2 | 50.0 | 137.4 | 917.2 |
| 1987 | 143.7 | 112.2 | 68.2 | 28.0 | 3.2 | 7.6 | 13.2 | 12.6 | 90.4 | 38.8 | 138.4 | 79.9 | 736.2 |
| 1988 | 169.3 | 99.4 | 163.1 | 0.0 | 40.3 | 0.0 | 0.8 | 7.3 | 57.1 | 38.9 | 45.3 | 81.9 | 703.4 |
| 1989 | 164.3 | 168.6 | 177.5 | 74.6 | 17.5 | 14.3 | 3.4 | 29.3 | 20.7 | 53.4 | 18.1 | 12.2 | 753.9 |
| 1990 | 130.6 | 29.2 | 58.9 | 48.7 | 33.5 | 54.1 | 3.2 | 14.6 | 23.4 | 108.2 | 186.8 | 104.7 | 795.9 |
| 1991 | 71.9 | 88.0 | 103.3 | 46.9 | 30.0 | 9.4 | 10.2 | 0.0 | 48.6 | 85.1 | 42.7 | 77.0 | 613.1 |
| 1992 | 65.0 | 0.0 | 133.9 | 34.7 | 12.4 | 9.6 | 10.6 | 33.3 | 19.0 | 116.6 | 39.6 | 54.6 | 529.3 |
| 1993 | 197.6 | 126.5 | 126.4 | 82.0 | 11.3 | 0.0 | 6.6 | 11.3 | 39.4 | 83.1 | 124.4 | 217.9 | 1026.5 |
| 1994 | 311.6 | 53.2 | 0.0 | 0.0 | 55.3 | 29.0 | 12.9 | 34.6 | 74.9 | 101.7 | 151.2 | 294.9 | 1119.3 |
| 1995 | 208.6 | 166.3 | 262.1 | 127.7 | 50.8 | 6.2 | 4.7 | 15.0 | 43.6 | 70.9 | 75.9 | 137.3 | 1169.1 |
| 1996 | 132.1 | 152.4 | 115.8 | 57.2 | 31.5 | 4.8 | 0.0 | 10.2 | 39.6 | 48.1 | 47.5 | 92.5 | 731.7 |
| 1997 | 137.1 | 192.5 | 57.2 | 38.7 | 21.2 | 0.0 | 5.6 | 47.8 | 54.2 | 47.4 | 79.7 | 180.7 | 862.1 |
| 1998 | 174.0 | 130.8 | 136.3 | 47.5 | 0.0 | 2.3 | 0.0 | 17.5 | 47.6 | 86.0 | 60.3 | 42.0 | 744.3 |
| 1999 | 131.5 | 273.1 | 114.9 | 79.7 | 51.7 | 4.4 | 10.3 | 22.2 | 44.0 | 97.5 | 71.0 | 157.4 | 1057.7 |
| 2000 | 283.4 | 229.0 | 202.1 | 47.9 | 53.4 | 0.0 | 15.2 | 54.5 | 16.3 | 50.6 | 53.4 | 333.7 | 1339.5 |
| 2001 | 339.3 | 203.9 | 378.7 | 57.9 | 17.1 | 3.2 | 19.4 | 2.0 | 107.8 | 32.5 | 119.5 | 88.3 | 1369.6 |
| 2002 | 82.6 | 151.8 | 169.2 | 86.8 | 31.3 | 11.5 | 24.9 | 21.8 | 59.7 | 0.0 | 127.9 | 122.2 | 889.7 |
| 2003 | 132.2 | 138.2 | 168.0 | 63.3 | 5.4 | 0.0 | 13.8 | 2.0 | 4.6 | 61.7 | 28.9 | 142.4 | 760.5 |
| 2004 | 10.4 | 132.5 | 89.0 | 49.4 | 16.1 | 18.5 | 8.9 | 10.1 | 53.2 | 100.3 | 103.0 | 177.9 | 769.3 |
| 2005 | 100.6 | 57.1 | 102.1 | 21.6 | 6.1 | 0.0 | 0.0 | 3.0 | 18.1 | 19.6 | 46.6 | 147.4 | 522.2 |
| 2006 | 165.3 | 120.8 | 173.0 | 86.7 | 8.9 | 0.0 | 0.0 | 12.3 | 26.9 | 75.6 | 101.5 | 144.1 | 915.1 |
| 2007 | 128.0 | 114.1 | 217.2 | 94.1 | 37.0 | 0.0 | 0.0 | 0.0 | 37.6 | 78.1 | 59.1 | 77.3 | 842.5 |
| 2008 | 192.6 | 205.3 | 113.1 | 62.4 | 0.0 | 0.0 | 0.0 | 15.5 | 11.5 | 56.6 | 48.1 | 100.5 | 805.6 |
| 2009 | 164.2 | 195.6 | 157.7 | 118.0 | 0.0 | 0.0 | 3.5 | 20.4 | 36.7 | 120.5 | 207.2 | 156.7 | 1180.5 |
| 2010 | 154.4 | 165.0 | 194.5 | 72.1 | 3.0 | 4.6 | 4.2 | 1.7 | 38.9 | 62.6 | 85.8 | 196.3 | 983.1 |
| 2011 | 184.7 | 148.5 | 161.5 | 94.4 | 13.3 | 0.0 | 8.8 | 16.9 | 32.3 | 42.7 | 107.7 | 183.7 | 994.5 |
| 2012 | 109.1 | 226.2 | 184.0 | 124.3 | 29.8 | 2.5 | 0.0 | 3.9 | 64.4 | 54.4 | 98.9 | 0.0 | 897.5 |
| 2013 | 123.5 | 205.2 | 139.8 | 41.6 | 52.0 | 9.0 | 8.4 | 20.6 | 8.2 | 62.8 | 77.0 | 144.9 | 893.0 |
| 2014 | 204.3 | 146.7 | 197.3 | 50.4 | 15.6 | 1.4 | 25.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 640.9 |

Datos procesados de información del Senamhi. Precipitación promedio de 881.5 mm anuales.

Estación Sheque 1987 – 2014

| Año | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC | ANUAL |
|------|-------|-------|-------|-------|------|-----|-----|------|------|------|------|-------|-------|
| 1987 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.9 | 2.3 | 46.2 | 48.3 | 100.7 |
| 1988 | 97.3 | 85.2 | 23.8 | 57.5 | 8.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 48.9 | 321.3 |
| 1989 | 100.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.2 | 0.3 | 39.1 | 2.6 | 0.0 | 144.9 |
| 1990 | 94.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 19.0 | 71.1 | 35.1 | 219.7 |
| 1991 | 60.4 | 61.2 | 0.0 | 28.2 | 13.8 | 0.0 | 0.0 | 0.0 | 0.0 | 33.2 | 31.8 | 25.8 | 254.4 |
| 1992 | 43.2 | 35.0 | 62.4 | 26.6 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 45.1 | 10.4 | 34.2 | 259.9 |
| 1993 | 77.3 | 108.9 | 122.8 | 37.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.8 | 0.0 | 45.3 | 65.7 | 462.8 |
| 1994 | 88.8 | 148.1 | 183.5 | 38.2 | 31.3 | 8.7 | 0.0 | 0.0 | 1.3 | 62.7 | 23.2 | 14.8 | 600.6 |
| 1995 | 70.0 | 38.3 | 74.8 | 28.5 | 10.7 | 4.6 | 0.0 | 0.2 | 4.6 | 16.8 | 28.1 | 58.8 | 335.4 |
| 1996 | 89.2 | 85.1 | 121.8 | 19.9 | 11.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 9.6 | 31.7 | 369.0 |
| 1997 | 51.9 | 65.8 | 7.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 11.0 | 16.3 | 37.2 | 194.5 | 384.6 |
| 1998 | 234.1 | 141.0 | 190.9 | 15.0 | 0.3 | 0.5 | 4.0 | 2.5 | 8.5 | 9.7 | 15.5 | 25.7 | 647.7 |
| 1999 | 44.2 | 280.8 | 118.7 | 37.6 | 11.9 | 9.2 | 1.2 | 0.8 | 14.6 | 8.5 | 27.1 | 62.1 | 616.7 |
| 2000 | 95.2 | 217.7 | 183.8 | 71.1 | 32.7 | 1.2 | 8.4 | 16.7 | 39.8 | 54.1 | 31.4 | 114.6 | 866.7 |
| 2001 | 149.1 | 100.3 | 198.8 | 67.5 | 3.6 | 2.4 | 0.0 | 0.0 | 16.2 | 18.7 | 30.5 | 17.2 | 604.3 |
| 2002 | 36.6 | 50.1 | 99.6 | 39.8 | 4.1 | 0.0 | 0.0 | 0.0 | 16.2 | 31.4 | 40.2 | 35.3 | 353.3 |
| 2003 | 96.2 | 100.3 | 183.4 | 38.1 | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.1 | 15.1 | 95.3 | 536.5 |
| 2004 | 17.4 | 63.7 | 89.8 | 18.7 | 0.0 | 5.1 | 0.0 | 0.6 | 4.2 | 0.2 | 34.2 | 110.3 | 344.2 |
| 2005 | 71.2 | 67.2 | 65.1 | 67.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.8 | 3.0 | 139.0 | 418.5 |
| 2006 | 109.8 | 118.2 | 160.6 | 100.1 | 0.0 | 1.4 | 0.0 | 19.9 | 11.9 | 21.7 | 52.2 | 82.1 | 677.9 |
| 2007 | 126.7 | 84.7 | 89.5 | 44.6 | 22.8 | 1.4 | 0.2 | 0.2 | 0.4 | 10.5 | 27.0 | 33.9 | 441.9 |
| 2008 | 68.6 | 141.2 | 53.7 | 14.4 | 0.4 | 0.2 | 0.0 | 0.7 | 0.8 | 20.9 | 20.9 | 32.0 | 353.8 |
| 2009 | 116.4 | 150.8 | 139.2 | 53.9 | 1.4 | 0.0 | 0.0 | 1.1 | 2.7 | 61.8 | 86.0 | 62.9 | 676.2 |
| 2010 | 62.3 | 82.6 | 69.4 | 26.5 | 2.4 | 0.2 | 0.1 | 0.0 | 6.5 | 12.7 | 24.3 | 89.9 | 376.9 |
| 2011 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.6 | 12.7 | 18.3 | 27.3 | 59.0 |
| 2012 | 33.7 | 25.9 | 47.7 | 48.9 | 0.3 | 0.0 | 0.0 | 0.3 | 10.4 | 29.9 | 20.7 | 0.0 | 217.8 |
| 2013 | 40.0 | 66.7 | 71.5 | 12.7 | 23.1 | 3.4 | 0.0 | 4.4 | 0.1 | 15.9 | 8.5 | 51.1 | 297.4 |
| 2014 | 96.3 | 54.5 | 127.3 | 14.9 | 0.0 | 0.0 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 294.3 |

Datos procesados de información del Senamhi. Precipitación promedio de 401.3 mm anuales.

Estación Tingo 1995 – 2014

| Año | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC | ANUAL |
|------|-------|-------|-------|-------|------|------|-----|------|------|-------|-------|-------|--------|
| 1995 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 58.6 | 119.3 | 60.2 | 136.5 | 374.6 |
| 1996 | 161.1 | 225.1 | 137.8 | 66.3 | 24.4 | 0.1 | 0.5 | 0.0 | 2.4 | 18.5 | 9.0 | 25.0 | 670.2 |
| 1997 | 95.6 | 167.9 | 44.4 | 42.4 | 0.5 | 0.2 | 4.9 | 7.0 | 32.6 | 64.1 | 88.1 | 178.6 | 726.3 |
| 1998 | 241.5 | 149.6 | 232.2 | 25.4 | 4.2 | 0.3 | 0.4 | 14.2 | 15.5 | 47.1 | 34.5 | 12.6 | 777.5 |
| 1999 | 47.9 | 91.2 | 103.9 | 98.5 | 10.3 | 1.1 | 4.0 | 3.5 | 15.8 | 15.5 | 72.5 | 70.3 | 534.5 |
| 2000 | 75.0 | 132.0 | 88.6 | 36.3 | 47.6 | 0.2 | 0.5 | 13.0 | 66.3 | 107.8 | 40.4 | 132.8 | 740.5 |
| 2001 | 183.9 | 83.9 | 134.0 | 89.5 | 1.2 | 0.6 | 2.2 | 1.8 | 68.0 | 49.8 | 80.8 | 72.7 | 768.4 |
| 2002 | 70.1 | 144.9 | 170.9 | 86.1 | 5.7 | 2.7 | 2.9 | 0.6 | 3.8 | 78.4 | 54.5 | 118.5 | 739.1 |
| 2003 | 75.2 | 109.1 | 196.6 | 85.4 | 15.9 | 11.8 | 1.3 | 0.9 | 1.1 | 50.1 | 18.2 | 168.7 | 734.3 |
| 2004 | 41.0 | 186.9 | 139.8 | 79.1 | 8.2 | 20.0 | 2.2 | 1.1 | 71.8 | 65.8 | 101.5 | 204.0 | 921.4 |
| 2005 | 145.4 | 111.3 | 181.4 | 63.1 | 6.3 | 0.0 | 0.0 | 1.2 | 2.2 | 23.8 | 44.0 | 128.1 | 706.8 |
| 2006 | 160.4 | 177.9 | 235.7 | 110.1 | 2.3 | 5.8 | 0.0 | 2.2 | 27.3 | 69.2 | 91.0 | 195.7 | 1077.6 |
| 2007 | 189.7 | 184.4 | 282.3 | 95.7 | 12.6 | 1.1 | 0.0 | 3.3 | 24.3 | 71.0 | 30.6 | 116.4 | 1011.4 |
| 2008 | 0.0 | 180.0 | 109.2 | 48.4 | 4.6 | 2.5 | 0.0 | 7.4 | 4.8 | 66.5 | 35.2 | 110.8 | 569.4 |
| 2009 | 167.1 | 235.2 | 183.3 | 69.4 | 45.9 | 1.3 | 0.0 | 21.1 | 21.5 | 102.9 | 157.5 | 192.0 | 1197.2 |
| 2010 | 194.6 | 147.6 | 219.6 | 97.5 | 2.8 | 0.0 | 0.0 | 5.0 | 16.5 | 30.4 | 49.8 | 209.0 | 972.8 |
| 2011 | 221.4 | 218.3 | 225.5 | 157.6 | 7.9 | 0.0 | 0.0 | 11.1 | 30.5 | 29.5 | 83.5 | 186.0 | 1171.3 |
| 2012 | 121.4 | 200.2 | 189.2 | 168.7 | 27.4 | 0.0 | 0.0 | 0.0 | 69.0 | 84.0 | 98.9 | 0.0 | 958.8 |
| 2013 | 91.0 | 217.1 | 172.4 | 62.5 | 26.9 | 0.0 | 6.8 | 13.4 | 30.6 | 106.1 | 67.4 | 145.8 | 940.0 |
| 2014 | 190.7 | 148.3 | 190.2 | 80.0 | 20.9 | 0.5 | 7.8 | 0.0 | 0 | 0 | 0 | 0 | 638.4 |

Datos procesados de información del Senamhi. Precipitación promedio de 834.5 mm anuales.

Estación Carampoma 1983 - 2014

| Año | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC | ANUAL |
|------|-------|-------|-------|-------|------|-----|------|-----|------|------|------|-------|-------|
| 1983 | 25.2 | 9.2 | 104.2 | 25.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.4 | 7.5 | 63.6 | 243.2 |
| 1984 | 41.4 | 179.1 | 121.2 | 20.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 23.0 | 45.9 | 90.7 | 521.7 |
| 1985 | 5.8 | 94.6 | 87.3 | 45.1 | 0.0 | 0.0 | 0.0 | 0.0 | 12.9 | 0.0 | 0.0 | 61.7 | 307.4 |
| 1986 | 117.5 | 84.8 | 81.7 | 65.4 | 0.0 | 0.0 | 11.2 | 6.7 | 2.6 | 0.0 | 7.6 | 51.8 | 429.3 |
| 1987 | 121.9 | 68.8 | 20.0 | 7.1 | 0.0 | 0.0 | 0.0 | 0.0 | 2.3 | 3.4 | 35.4 | 0.0 | 258.9 |
| 1988 | 133.7 | 48.2 | 49.3 | 28.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8.6 | 3.5 | 38.4 | 310.6 |
| 1989 | 136.1 | 68.8 | 105.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.5 | 33.9 | 0.0 | 0.0 | 347.7 |
| 1990 | 93.7 | 16.5 | 41.4 | 0.0 | 19.0 | 1.0 | 0.0 | 4.2 | 0.0 | 26.6 | 45.9 | 57.0 | 305.3 |
| 1991 | 40.6 | 64.4 | 95.9 | 25.6 | 9.2 | 0.0 | 0.0 | 0.0 | 0.0 | 21.0 | 31.0 | 14.0 | 301.7 |
| 1992 | 34.5 | 31.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.9 | 39.3 | 0.0 | 35.8 | 142.7 |
| 1993 | 78.7 | 66.3 | 90.3 | 37.6 | 0.0 | 0.0 | 0.0 | 0.0 | 2.8 | 5.5 | 18.9 | 63.4 | 363.5 |
| 1994 | 91.9 | 122.2 | 77.4 | 41.1 | 2.8 | 0.0 | 0.0 | 0.0 | 9.2 | 0.0 | 28.6 | 64.1 | 437.3 |
| 1995 | 54.9 | 18.2 | 51.6 | 25.5 | 11.8 | 0.1 | 0.0 | 0.0 | 6.4 | 21.4 | 52.3 | 65.0 | 307.2 |
| 1996 | 87.4 | 91.9 | 108.4 | 26.1 | 10.8 | 0.0 | 0.0 | 2.1 | 9.5 | 21.3 | 19.1 | 54.2 | 430.8 |
| 1997 | 53.3 | 98.4 | 7.3 | 12.1 | 7.7 | 0.0 | 0.0 | 0.0 | 15.3 | 35.4 | 35.7 | 114.3 | 379.5 |
| 1998 | 148.7 | 119.0 | 142.8 | 15.8 | 0.0 | 0.0 | 0.0 | 0.0 | 2.9 | 24.5 | 19.5 | 50.1 | 523.3 |
| 1999 | 64.7 | 170.0 | 79.8 | 43.9 | 13.9 | 1.4 | 0.0 | 0.0 | 5.6 | 45.7 | 23.2 | 57.0 | 505.2 |
| 2000 | 112.3 | 154.2 | 125.3 | 41.0 | 13.3 | 0.0 | 3.7 | 2.1 | 10.7 | 45.3 | 16.5 | 114.4 | 638.8 |
| 2001 | 157.6 | 143.7 | 210.6 | 62.3 | 0.2 | 0.0 | 0.0 | 0.0 | 18.1 | 19.7 | 75.3 | 17.5 | 705.0 |
| 2002 | 44.4 | 107.9 | 113.9 | 54.5 | 2.1 | 1.3 | 0.2 | 0.0 | 8.8 | 47.0 | 66.5 | 23.8 | 470.4 |
| 2003 | 76.5 | 69.4 | 103.0 | 29.2 | 3.7 | 0.0 | 0.0 | 0.0 | 0.0 | 10.7 | 4.8 | 89.1 | 386.4 |
| 2004 | 20.2 | 88.4 | 55.9 | 55.8 | 1.7 | 1.3 | 0.0 | 0.0 | 12.3 | 23.8 | 31.4 | 96.1 | 386.9 |
| 2005 | 95.7 | 40.8 | 96.0 | 14.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.0 | 7.1 | 72.4 | 336.8 |
| 2006 | 123.5 | 117.4 | 142.4 | 61.1 | 0.1 | 0.0 | 0.0 | 2.2 | 10.7 | 16.7 | 18.0 | 114.2 | 606.3 |
| 2007 | 125.9 | 92.3 | 145.3 | 78.9 | 6.3 | 0.0 | 0.0 | 0.0 | 0.0 | 15.7 | 22.9 | 50.9 | 538.2 |
| 2008 | 130.3 | 143.7 | 65.4 | 9.2 | 0.0 | 1.3 | 0.0 | 1.0 | 0.7 | 13.2 | 23.6 | 76.2 | 464.6 |
| 2009 | 129.5 | 154.3 | 145.6 | 52.4 | 6.1 | 0.0 | 0.0 | 0.0 | 2.7 | 63.0 | 73.5 | 50.3 | 677.4 |
| 2010 | 56.6 | 54.2 | 94.3 | 25.3 | 3.2 | 1.0 | 0.0 | 0.0 | 13.8 | 8.7 | 23.2 | 122.3 | 402.6 |
| 2011 | 125.9 | 64.2 | 115.3 | 72.5 | 0.0 | 0.0 | 0.2 | 0.0 | 6.1 | 7.7 | 62.6 | 98.5 | 553.0 |
| 2012 | 31.0 | 113.3 | 125.7 | 109.3 | 7.2 | 0.0 | 0.0 | 0.0 | 21.1 | 40.0 | 40.5 | 0.0 | 488.1 |
| 2013 | 39.6 | 103.9 | 119.9 | 2.1 | 19.2 | 1.1 | 0.0 | 3.4 | 0.0 | 20.7 | 27.6 | 77.9 | 415.4 |
| 2014 | 71.5 | 78.3 | 88.9 | 27.8 | 9.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 275.9 |

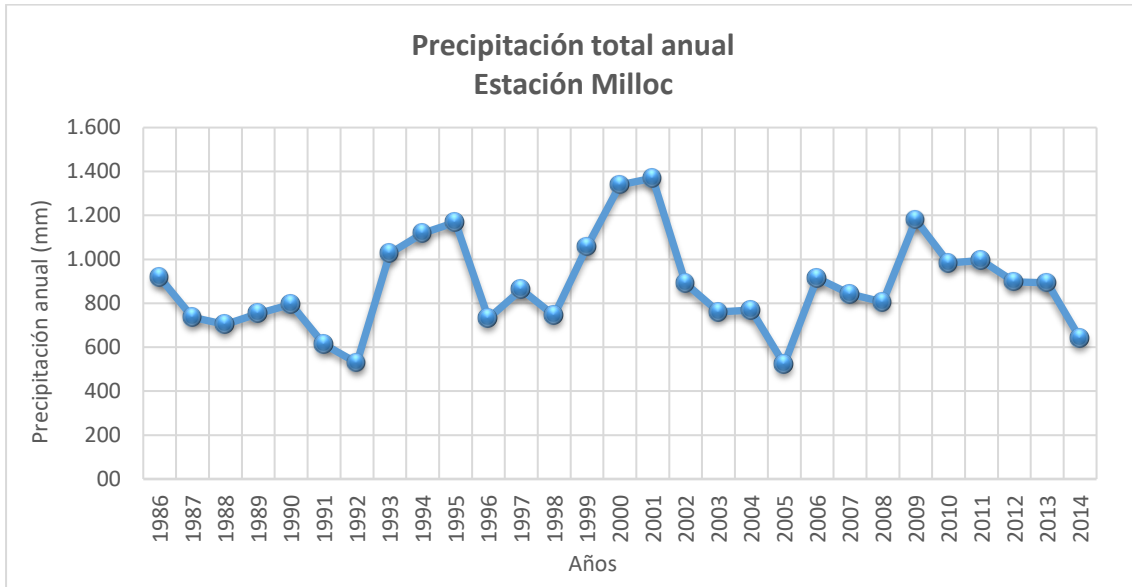
Datos procesados de información del Senamhi. Precipitación promedio de 420.7 mm anuales.

Estación Casapalca 1987 - 2014

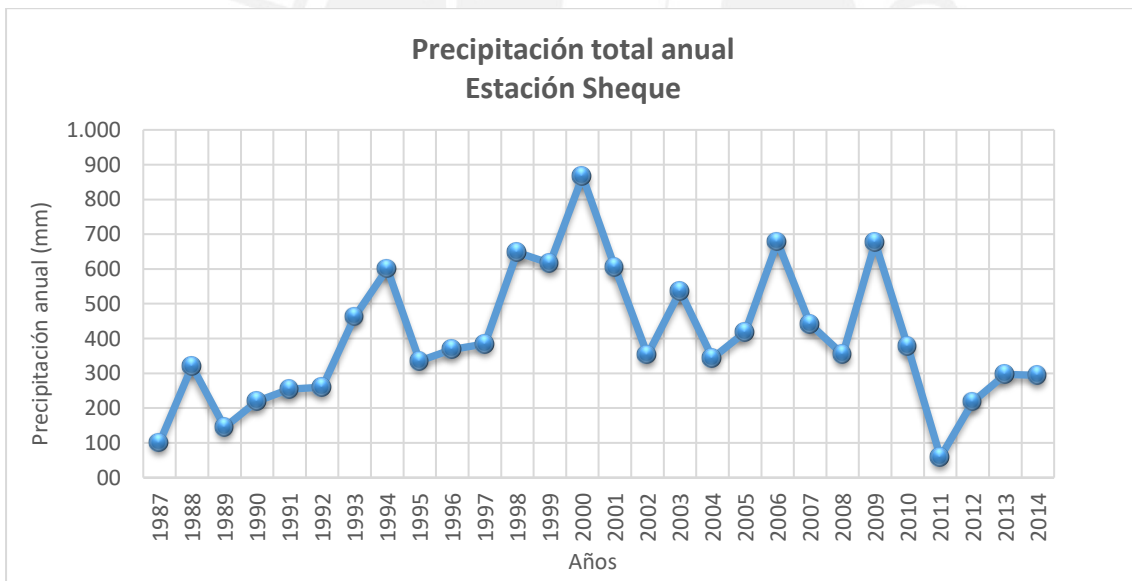
| Año | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC | ANUAL |
|------|-------|-------|-------|-------|------|------|------|------|------|-------|-------|-------|--------|
| 1987 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 89.9 | 21.5 | 16.3 | 95 | 222.7 |
| 1988 | 110 | 100.5 | 124 | 67 | 0 | 0 | 3.7 | 5.4 | 42.8 | 42 | 48.5 | 7 | 550.9 |
| 1989 | 182.9 | 134.8 | 159.1 | 52.4 | 3 | 0 | 0 | 0 | 0 | 35.1 | 11 | 0 | 578.3 |
| 1990 | 77.2 | 27.9 | 45.1 | 17.2 | 38.2 | 34.3 | 0 | 0 | 0 | 0 | 0 | 0 | 239.9 |
| 1991 | 0 | 0 | 0 | 0 | 0 | 0 | 4.2 | 17.4 | 10.1 | 3.3 | 2 | 2.8 | 39.8 |
| 1992 | 15.7 | 24.8 | 44.5 | 11.1 | 5.5 | 1.4 | 2.5 | 18.2 | 4.6 | 71.3 | 34.6 | 42.2 | 276.4 |
| 1993 | 148.3 | 119.2 | 111.9 | 75.9 | 19.8 | 0 | 10.5 | 9.5 | 25.6 | 76.3 | 111.7 | 124.9 | 833.6 |
| 1994 | 129.2 | 157.9 | 149 | 84.3 | 27.9 | 7 | 5.8 | 19.8 | 49.2 | 38.7 | 35.2 | 71 | 775 |
| 1995 | 62.5 | 64.5 | 100.5 | 50.2 | 9 | 5 | 0.3 | 2.8 | 32.4 | 48.2 | 37.3 | 86.3 | 499 |
| 1996 | 127.3 | 121.7 | 93.7 | 57 | 22.8 | 0 | 5 | 8 | 23 | 46.2 | 47.5 | 64.1 | 616.3 |
| 1997 | 114 | 128 | 58 | 22 | 12.1 | 0 | 2 | 51.5 | 44.7 | 63.5 | 27 | 126 | 648.8 |
| 1998 | 103 | 76.3 | 71.4 | 44.2 | 0 | 7.2 | 0 | 11.6 | 31.5 | 52.6 | 40.2 | 31.1 | 469.1 |
| 1999 | 112.2 | 189.8 | 84.7 | 65.5 | 21.8 | 9 | 3.3 | 0 | 31.5 | 39 | 33.2 | 104.8 | 694.8 |
| 2000 | 107.1 | 84.2 | 120.9 | 31.7 | 14.9 | 0 | 12.5 | 18 | 14.6 | 104.8 | 57.9 | 200.6 | 767.2 |
| 2001 | 201.1 | 62.5 | 174.2 | 43.5 | 22.5 | 2 | 15.7 | 3.2 | 24.4 | 54.3 | 96.9 | 77.4 | 777.7 |
| 2002 | 60.5 | 79 | 156.5 | 58 | 27.1 | 6 | 4.7 | 0 | 12.9 | 35.7 | 85.1 | 131.1 | 656.6 |
| 2003 | 145.4 | 146.7 | 138.4 | 76.9 | 7.1 | 0 | 11.5 | 6.3 | 24 | 66.8 | 16.5 | 111.5 | 751.1 |
| 2004 | 33.5 | 117 | 79.6 | 30.6 | 12.8 | 22.6 | 5.2 | 7 | 17.9 | 100.2 | 79.5 | 102.1 | 608 |
| 2005 | 107.9 | 98.5 | 112.6 | 27 | 8.5 | 0 | 0 | 0 | 17.7 | 28.3 | 23.4 | 58.6 | 482.5 |
| 2006 | 106.1 | 91.7 | 147.9 | 79.5 | 4.9 | 10.5 | 0 | 19.2 | 29.3 | 32.4 | 59.5 | 114.8 | 695.8 |
| 2007 | 125.7 | 104.9 | 165.8 | 68.1 | 34 | 2.3 | 0 | 7.1 | 4.5 | 74.8 | 46.8 | 65 | 699 |
| 2008 | 162.4 | 118.9 | 55.8 | 27.5 | 6.9 | 1.5 | 1.8 | 3.4 | 4.2 | 64.6 | 31.5 | 117.8 | 596.3 |
| 2009 | 155.2 | 145.5 | 124.1 | 88.4 | 33.4 | 0 | 9.5 | 5.8 | 27 | 80.5 | 155.5 | 150.7 | 975.6 |
| 2010 | 169.8 | 92.4 | 130.8 | 58.6 | 6.1 | 7.3 | 1 | 0 | 11.6 | 44.1 | 49 | 108 | 678.7 |
| 2011 | 136.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 156.7 | 86.8 | 189.4 | 569.7 |
| 2012 | 120.5 | 220.6 | 126.6 | 98.44 | 5.7 | 8 | 8.8 | 5.9 | 67.5 | 57 | 87.5 | 0 | 806.54 |
| 2013 | 122.6 | 338 | 187.8 | 36.2 | 44.6 | 24 | 18.1 | 16.6 | 35 | 69.4 | 65.3 | 146.2 | 1103.8 |
| 2014 | 149.2 | 111.3 | 200.7 | 49.1 | 24.6 | 8.2 | 18.1 | 0 | 0 | 0 | 0 | 0 | 561.2 |

Datos procesados de información del Senamhi. Precipitación promedio de 616.3 mm anuales.

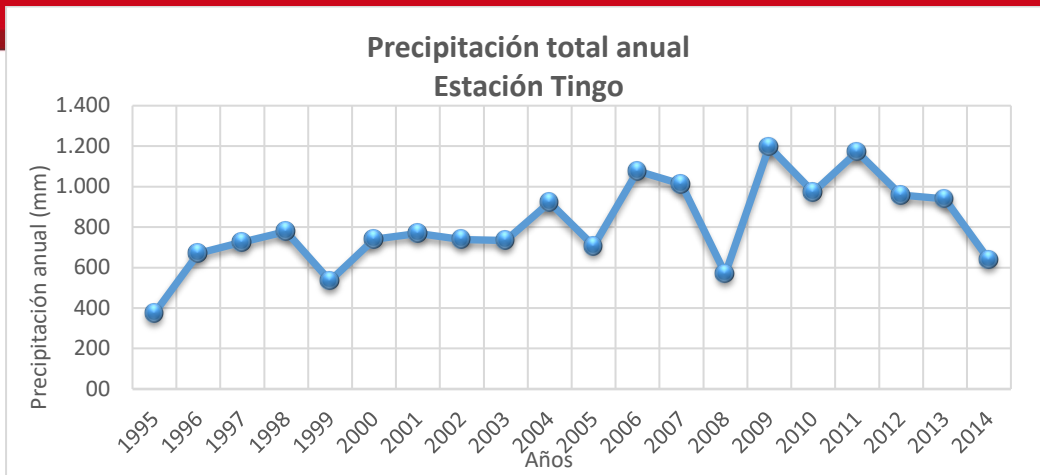
Serie Histórica:



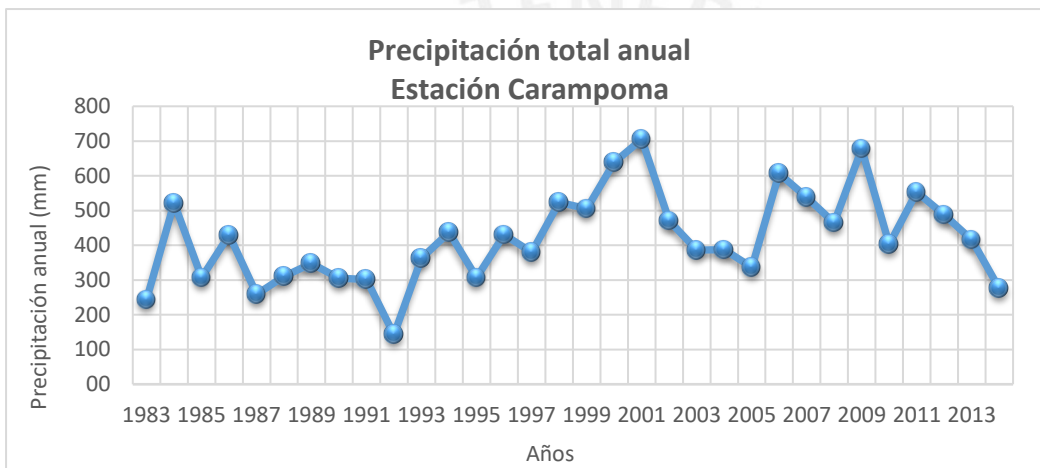
Serie anual Estación pluviométrica Milloc.



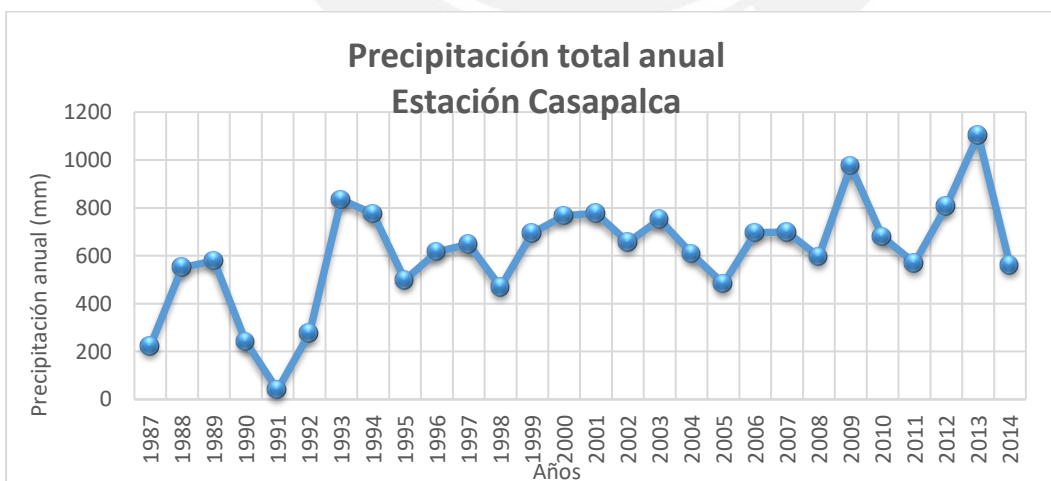
Serie anual Estación pluviométrica Sheque.



Serie anual Estación pluviométrica Tingo.



Serie anual Estación pluviométrica Carampoma.



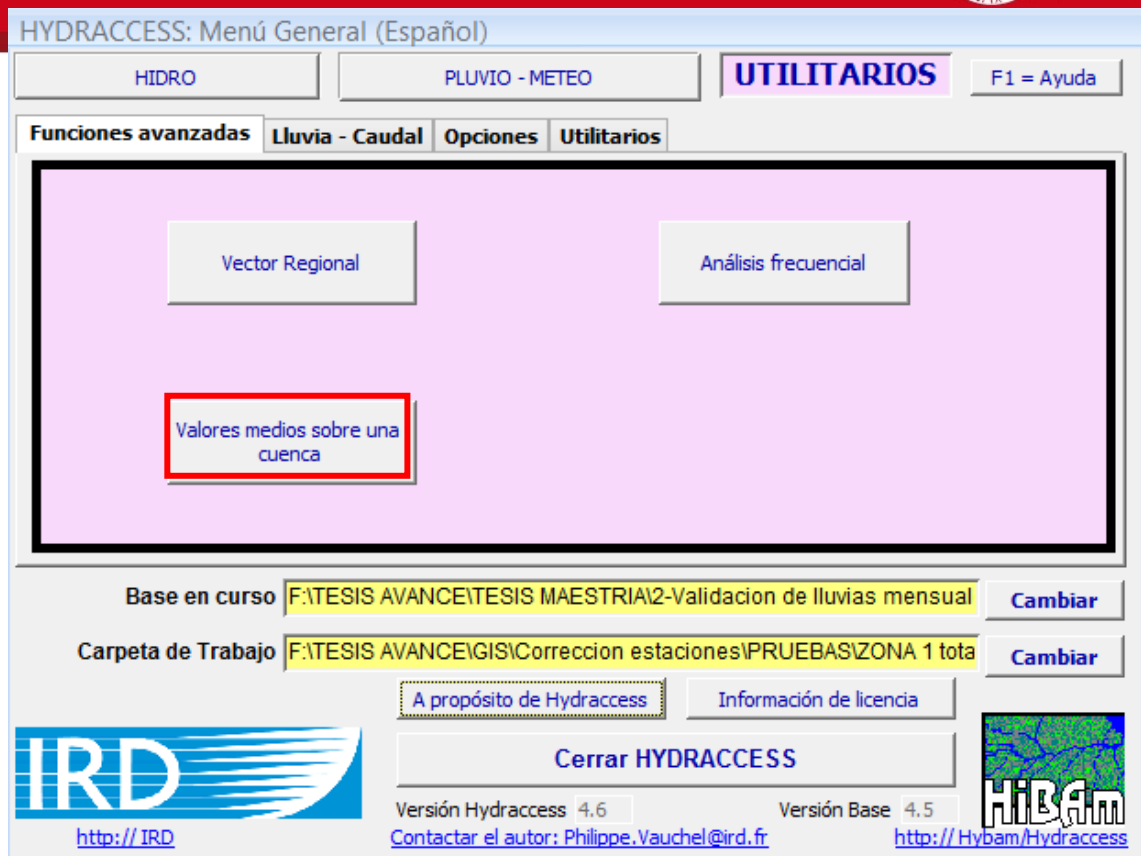
Serie anual Estación pluviométrica Casapalca.

4. Precipitación anual promedio, Thiessen

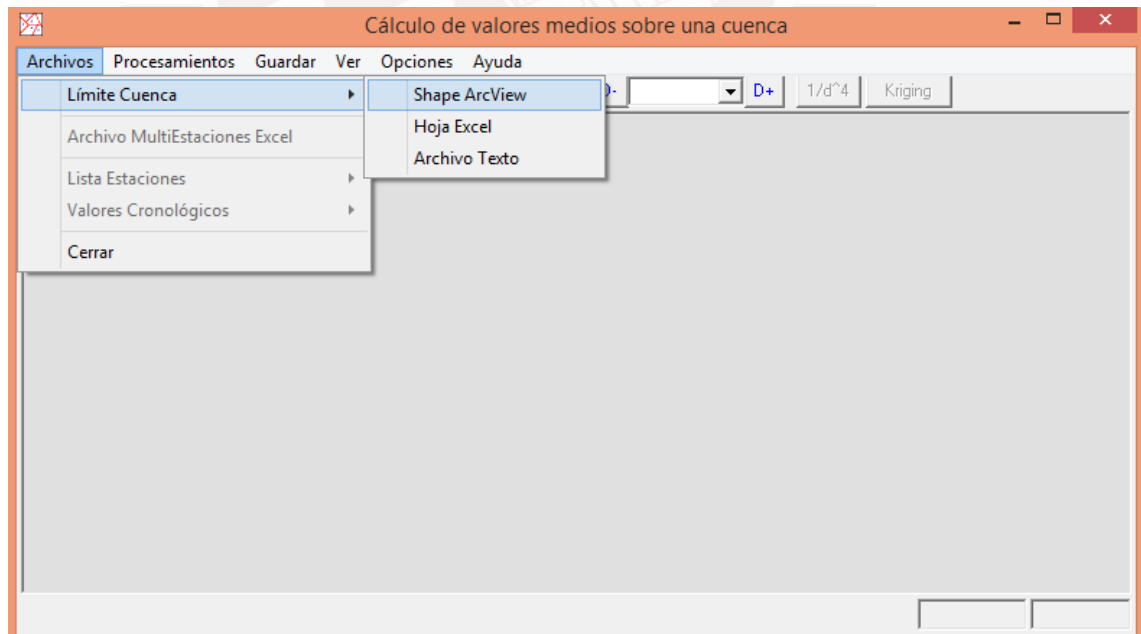
1. A partir de las delimitaciones de ambas cuencas, de la Minicentral y la Estación Sheque, se conoce el área como se indica en el Anexo II.
2. A partir de los datos de precipitación total anual de las estaciones Tingo, Casapalca, Sheque, Carampoma y Milloc, para la escala temporal (1995-2014). Se realizan los promedios de precipitaciones anuales como se muestra en la siguiente tabla:

| PRECIPITACIÓN MEDIA ANUAL | | | | | |
|---------------------------|--------|-----------|-----------|--------|--------|
| Año | Sheque | Carampoma | Casapalca | Milloc | Tingo |
| 1995 | 335.4 | 307.2 | 499 | 1169.1 | 374.6 |
| 1996 | 369 | 430.8 | 616.3 | 731.7 | 670.2 |
| 1997 | 384.6 | 379.5 | 648.8 | 862.1 | 726.3 |
| 1998 | 647.7 | 523.3 | 469.1 | 744.3 | 777.5 |
| 1999 | 616.7 | 505.2 | 694.8 | 1073 | 534.5 |
| 2000 | 866.7 | 638.8 | 767.2 | 1339.5 | 740.5 |
| 2001 | 604.3 | 705 | 777.7 | 1369.6 | 768.4 |
| 2002 | 353.3 | 470.4 | 656.6 | 966.9 | 739.1 |
| 2003 | 536.5 | 386.4 | 751.1 | 760.5 | 734.3 |
| 2004 | 344.2 | 386.9 | 608 | 769.3 | 921.4 |
| 2005 | 418.5 | 336.8 | 500.3 | 522.2 | 706.8 |
| 2006 | 677.9 | 606.3 | 695.8 | 915.1 | 1077.6 |
| 2007 | 441.9 | 538.2 | 699 | 842.5 | 1011.4 |
| 2008 | 353.8 | 464.6 | 596.3 | 805.6 | 569.4 |
| 2009 | 676.2 | 677.4 | 975.6 | 1180.5 | 1197.2 |
| 2010 | 376.9 | 402.6 | 678.7 | 983.1 | 972.8 |
| 2011 | 59 | 553 | 569.7 | 994.5 | 1171.3 |
| 2012 | 217.8 | 488.1 | 806.54 | 897.5 | 958.8 |
| 2013 | 297.4 | 415.44 | 1103.8 | 893 | 940 |
| 2014 | 294.3 | 275.9 | 561.2 | 640.9 | 638.4 |

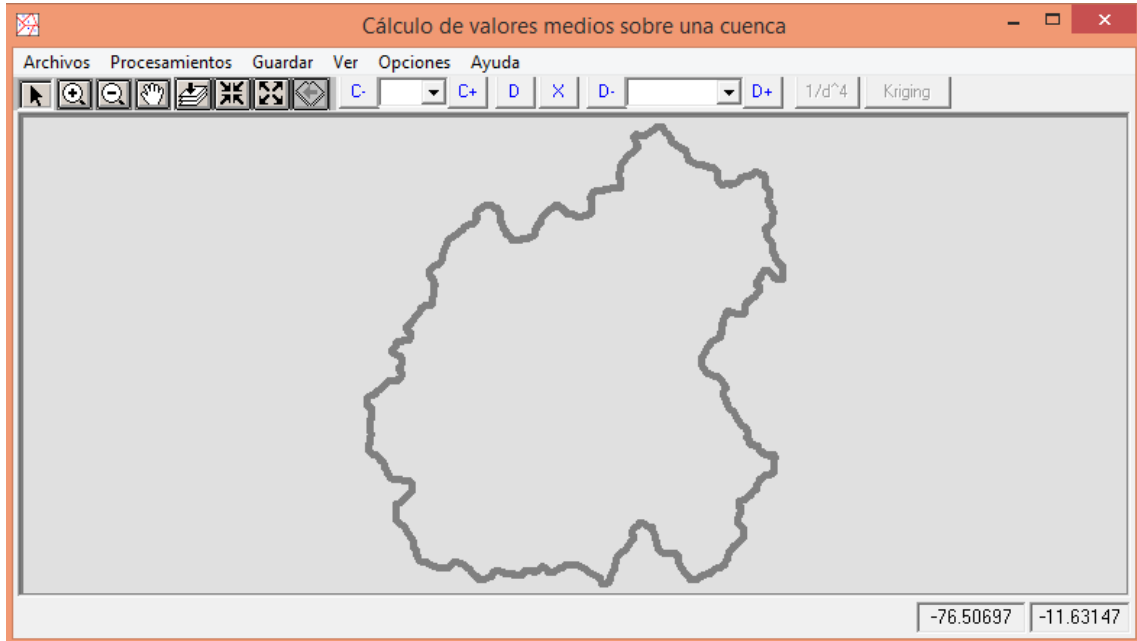
3. Se procedió a calcular la precipitación media anual de las cuencas nombradas en el primer paso mediante el método de Thiessen con ayuda del software Hydraccess.
4. Se deberá verificar que los archivos ArcView generados previamente con el ArcGIS estén georreferenciados en coordenadas geográficas para que el Hydraccess los reconozca.
5. Se ingresa a la interface del Hydraccess para el cálculo de valores medios sobre una cuenca en la sección utilitarios.



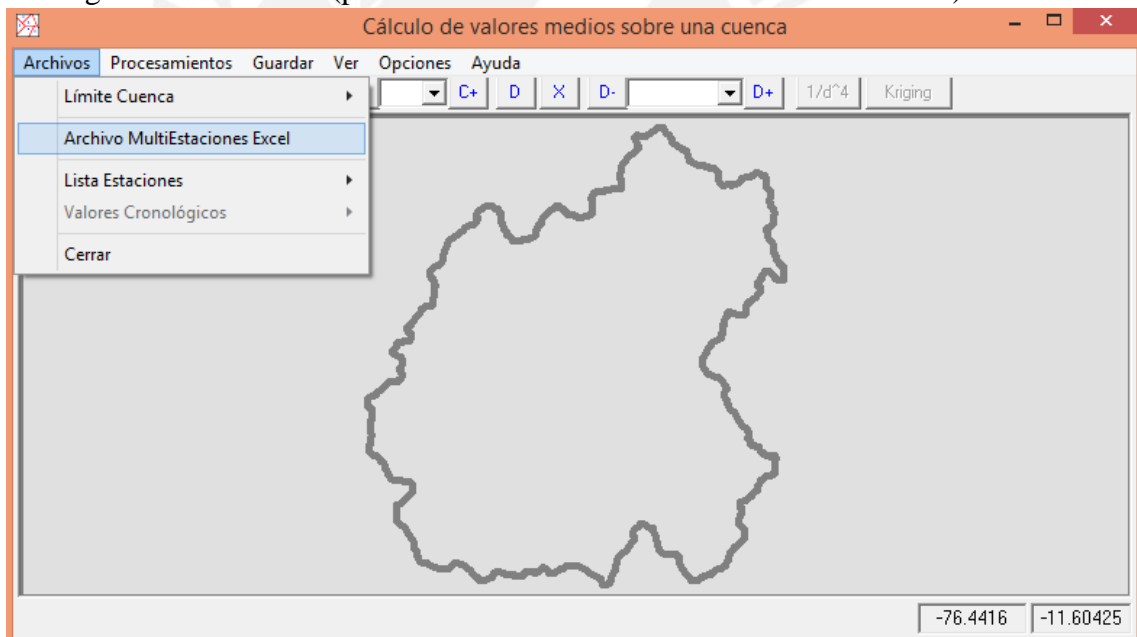
6. Se carga el archivo ArcView en la pestaña archivo/Limite de Cuenca/Shape ArcView.



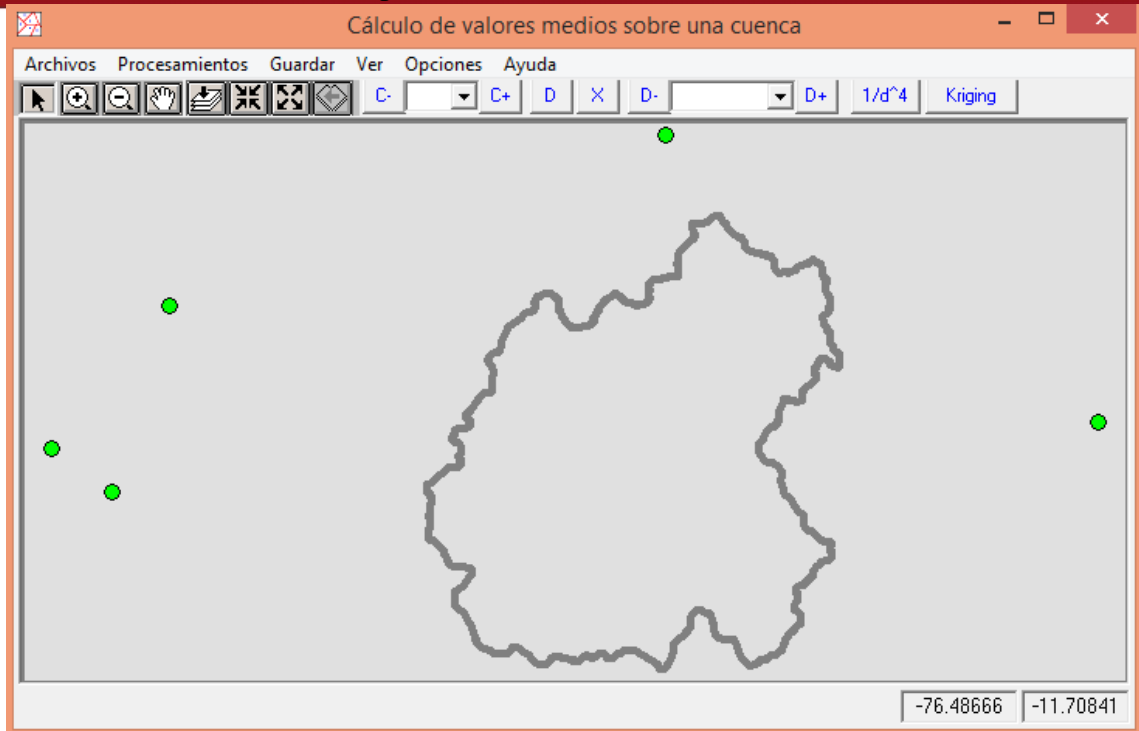
Cuenca generada por el punto de interés



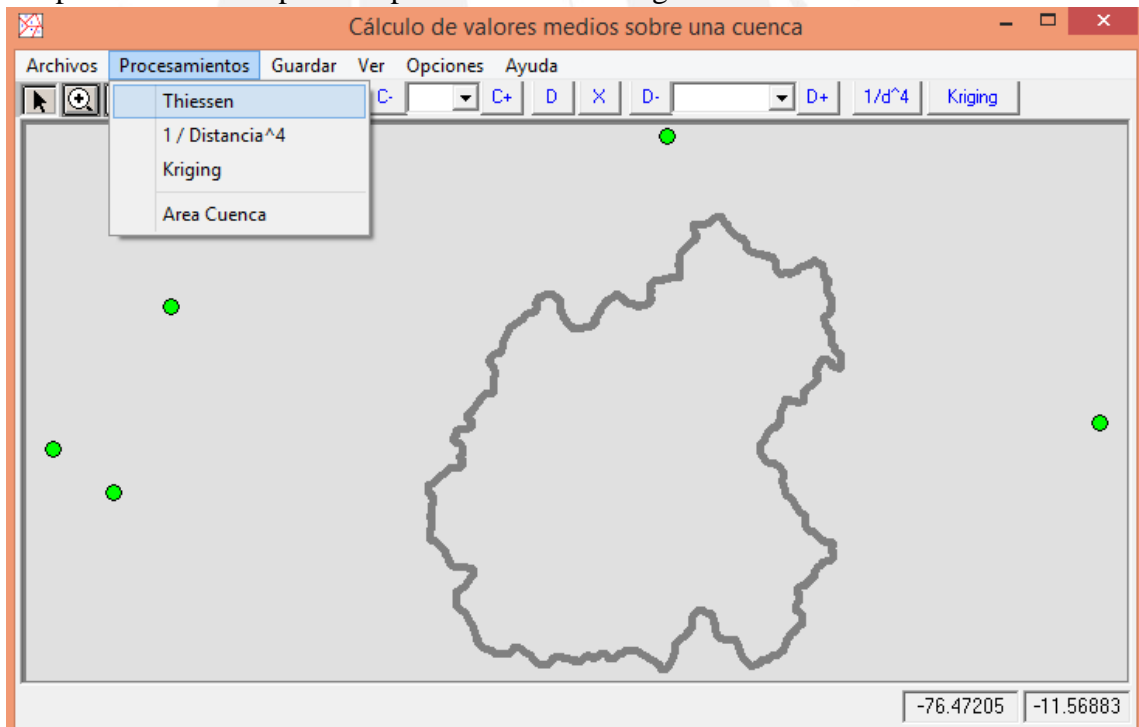
7. Se cargan las estaciones (pestaña archivo/Archivo MultiEstaciones Excel)



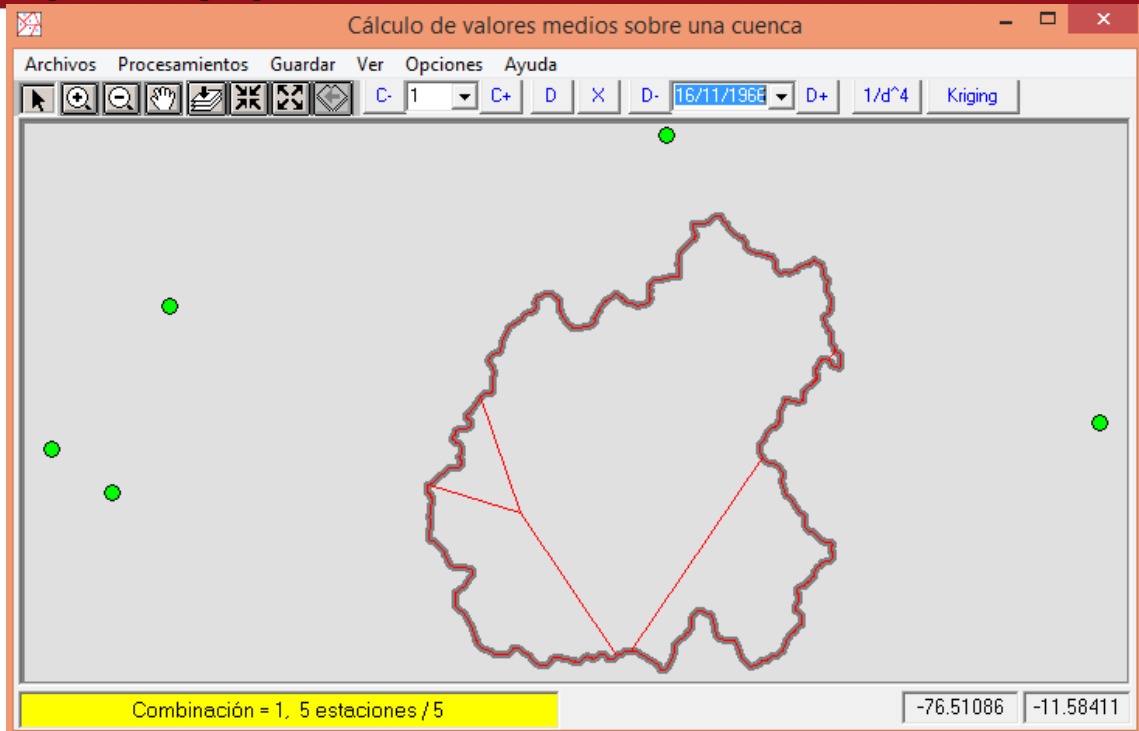
Estaciones con información (puntos verdes)



8. Después mediante la pestaña procesamiento se elige el Método de Thiessen



Se generan los polígonos de Thiessen en la cuenca de interés



9. Finalmente, se guardan los valores medios obteniendo en un archivo Excel.



10. Los resultados presentan, en la primera pestaña de la hoja de resultados, los valores de precipitación media anual de la cuenca para la escala temporal.

| Cuenca Estación Sheque | | | | Cuenca Minicentral | | | |
|------------------------|------------|-----------|----------|--------------------|------------|-----------|----------|
| Año | Estaciones | Med.Aritm | Thiessen | Año | Estaciones | Med.Aritm | Thiessen |
| 1995 | 5 | 537.1 | 822.6 | 1995 | 5 | 537.1 | 920.3 |
| 1996 | 5 | 563.6 | 668 | 1996 | 5 | 563.6 | 660.9 |
| 1997 | 5 | 600.3 | 760.2 | 1997 | 5 | 600.3 | 757.4 |
| 1998 | 5 | 632.4 | 729.7 | 1998 | 5 | 632.4 | 688.8 |
| 1999 | 5 | 684.8 | 854.1 | 1999 | 5 | 684.8 | 931.5 |
| 2000 | 5 | 870.5 | 1092.8 | 2000 | 5 | 870.5 | 1163.1 |
| 2001 | 5 | 845 | 1088.2 | 2001 | 5 | 845 | 1149.3 |
| 2002 | 5 | 637.3 | 819.4 | 2002 | 5 | 637.3 | 824.8 |
| 2003 | 5 | 633.8 | 727.3 | 2003 | 5 | 633.8 | 726.9 |
| 2004 | 5 | 606 | 755.6 | 2004 | 5 | 606 | 689.9 |
| 2005 | 5 | 496.9 | 560.6 | 2005 | 5 | 496.9 | 510.7 |
| 2006 | 5 | 794.5 | 923 | 2006 | 5 | 794.5 | 853.2 |
| 2007 | 5 | 706.6 | 837.1 | 2007 | 5 | 706.6 | 769.9 |
| 2008 | 5 | 557.9 | 678.9 | 2008 | 5 | 557.9 | 701.6 |
| 2009 | 5 | 941.4 | 1118.2 | 2009 | 5 | 941.4 | 1078.6 |
| 2010 | 5 | 682.8 | 897.1 | 2010 | 5 | 682.8 | 850.4 |
| 2011 | 5 | 669.5 | 917.4 | 2011 | 5 | 669.5 | 803.5 |
| 2012 | 5 | 673.7 | 833 | 2012 | 5 | 673.7 | 790.6 |
| 2013 | 5 | 729.9 | 848.1 | 2013 | 5 | 729.9 | 844.6 |
| 2014 | 5 | 482.1 | 597.1 | 2014 | 5 | 482.1 | 580 |
| TOTAL | | 13346.1 | 16528.4 | TOTAL | | 13346.1 | 16296 |

11. La segunda pestaña muestra los aportes de áreas de cada estación.

| | Área Cuenca Minicentral (%) | Área Cuenca Estación Sheque(%) |
|-----------|-----------------------------|--------------------------------|
| Sheque | 0.14 | 0.11 |
| Carampoma | 0.00 | 0.00 |
| Casapalca | 0.16 | 0.05 |
| Milloc | 0.67 | 0.56 |
| Tingo | 0.03 | 0.28 |
| Suma | 1.00 | 1.00 |

12. A partir de estos resultados se puede obtener el coeficiente de correlación mediante el promedio de los valores medios hallados del paso 10.

| | Thiessen |
|--------------------|----------|
| Cuenca Minicentral | 16296 |
| Cuenca Sheque | 16528.4 |
| Relación | 0.986 |

5. CAUDALES NATURALIZADOS (m³/s)- RIO SANTA EULALIA**ESTACIÓN SHEQUE (MANTARO NO REGULADO + STA. EULALIA NO REGULADO)**

| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC | PROM |
|------|-------|-------|-------|-------|-------|------|------|------|------|------|-------|-------|-------|
| 1965 | 4.12 | 14.74 | 13.02 | 5.49 | 4.64 | 3.13 | 3.13 | 2.27 | 2.34 | 2.96 | 3.54 | 5.46 | 5.40 |
| 1966 | 14.71 | 11.39 | 12.65 | 8.32 | 3.72 | 4.79 | 3.02 | 2.70 | 2.77 | 4.78 | 5.07 | 6.38 | 6.69 |
| 1967 | 5.40 | 28.24 | 25.60 | 8.27 | 5.20 | 2.52 | 3.87 | 4.43 | 4.62 | 6.72 | 5.67 | 4.67 | 8.77 |
| 1968 | 5.64 | 3.98 | 8.05 | 5.99 | 2.78 | 2.28 | 1.46 | 1.68 | 1.53 | 1.78 | 3.25 | 3.29 | 3.48 |
| 1969 | 2.79 | 8.32 | 10.56 | 10.92 | 4.72 | 2.04 | 2.11 | 2.52 | 2.46 | 2.79 | 4.41 | 15.20 | 5.74 |
| 1970 | 22.14 | 10.99 | 10.76 | 10.31 | 7.66 | 4.13 | 3.48 | 2.97 | 4.33 | 5.45 | 4.17 | 9.92 | 8.03 |
| 1971 | 13.45 | 17.70 | 24.87 | 13.90 | 6.86 | 4.14 | 3.08 | 3.44 | 3.28 | 2.82 | 2.66 | 6.62 | 8.57 |
| 1972 | 17.75 | 14.80 | 30.27 | 18.07 | 7.29 | 5.07 | 3.89 | 2.78 | 2.71 | 3.42 | 2.67 | 8.78 | 9.79 |
| 1973 | 19.39 | 26.50 | 24.82 | 19.87 | 7.82 | 4.82 | 3.97 | 2.50 | 4.02 | 4.85 | 6.12 | 12.43 | 11.43 |
| 1974 | 14.49 | 16.19 | 19.59 | 9.29 | 3.68 | 4.74 | 3.62 | 3.45 | 3.15 | 4.29 | 3.19 | 4.57 | 7.52 |
| 1975 | 8.30 | 8.69 | 23.38 | 9.91 | 6.66 | 4.54 | 3.27 | 3.11 | 4.88 | 2.94 | 4.01 | 4.18 | 6.99 |
| 1976 | 10.03 | 17.31 | 15.34 | 8.78 | 4.14 | 3.99 | 3.15 | 3.03 | 2.85 | 2.41 | 2.24 | 6.42 | 6.64 |
| 1977 | 5.99 | 22.19 | 13.34 | 7.98 | 6.26 | 2.95 | 2.71 | 2.68 | 2.68 | 3.78 | 7.25 | 6.91 | 7.06 |
| 1978 | 7.68 | 17.22 | 9.60 | 6.08 | 4.37 | 3.09 | 2.09 | 2.38 | 1.97 | 3.77 | 2.92 | 5.98 | 5.60 |
| 1979 | 4.56 | 16.72 | 21.66 | 10.57 | 4.86 | 2.77 | 2.80 | 2.63 | 4.75 | 2.25 | 2.01 | 0.92 | 6.38 |
| 1980 | 8.28 | 6.96 | 12.73 | 8.83 | 4.09 | 3.30 | 2.20 | 1.26 | 3.49 | 2.83 | 6.37 | 7.28 | 5.64 |
| 1981 | 9.88 | 27.12 | 21.39 | 9.23 | 4.99 | 4.29 | 3.81 | 2.30 | 2.42 | 4.67 | 6.11 | 9.18 | 8.78 |
| 1982 | 8.35 | 28.38 | 11.46 | 5.99 | 5.62 | 2.82 | 2.86 | 5.12 | 2.33 | 4.26 | 6.88 | 5.62 | 7.47 |
| 1983 | 8.72 | 5.04 | 12.89 | 13.18 | 4.62 | 4.55 | 2.28 | 2.07 | 2.48 | 2.34 | 2.16 | 6.49 | 5.57 |
| 1984 | 9.23 | 31.91 | 24.33 | 14.81 | 7.75 | 5.16 | 3.12 | 2.79 | 3.39 | 5.15 | 4.94 | 12.62 | 10.43 |
| 1985 | 7.51 | 12.98 | 17.58 | 13.92 | 6.83 | 5.09 | 4.27 | 2.63 | 2.92 | 2.00 | 3.30 | 8.15 | 7.27 |
| 1986 | 16.90 | 18.46 | 24.25 | 18.38 | 9.05 | 5.96 | 4.07 | 2.91 | 3.08 | 3.17 | 3.40 | 6.19 | 9.65 |
| 1987 | 17.44 | 17.54 | 10.68 | 5.50 | 3.55 | 2.12 | 2.61 | 2.06 | 1.60 | 2.72 | 3.57 | 8.38 | 6.48 |
| 1988 | 14.20 | 20.04 | 11.64 | 14.14 | 6.61 | 4.49 | 2.94 | 1.79 | 1.71 | 2.66 | 1.70 | 3.08 | 7.08 |
| 1989 | 15.16 | 23.33 | 21.29 | 14.53 | 6.87 | 3.31 | 3.30 | 1.71 | 2.26 | 3.89 | 4.81 | 6.82 | 8.94 |
| 1990 | 9.64 | 5.43 | 5.91 | 4.11 | 1.78 | 4.36 | 1.54 | 1.71 | 2.22 | 3.16 | 9.86 | 8.53 | 4.85 |
| 1991 | 7.61 | 9.33 | 18.27 | 8.27 | 6.90 | 3.95 | 3.46 | 1.88 | 2.15 | 3.30 | 3.57 | 3.03 | 5.98 |
| 1992 | 5.68 | 2.94 | 8.10 | 5.87 | 3.27 | 1.71 | 1.72 | 1.72 | 1.07 | 3.11 | 1.87 | 1.98 | 3.25 |
| 1993 | 7.78 | 15.04 | 17.82 | 12.19 | 7.07 | 2.91 | 2.64 | 2.19 | 2.60 | 4.12 | 10.21 | 15.28 | 8.32 |
| 1994 | 17.92 | 19.70 | 18.79 | 19.04 | 10.14 | 6.65 | 4.00 | 3.00 | 3.58 | 2.86 | 4.86 | 6.15 | 9.72 |
| 1995 | 9.67 | 8.09 | 12.89 | 12.40 | 4.87 | 3.17 | 2.75 | 2.60 | 2.46 | 2.55 | 5.04 | 7.64 | 6.18 |
| 1996 | 13.64 | 20.82 | 18.04 | 13.05 | 6.10 | 3.62 | 2.69 | 3.07 | 2.65 | 2.67 | 3.84 | 3.94 | 7.84 |
| 1997 | 8.22 | 16.25 | 9.94 | 4.50 | 4.57 | 4.12 | 4.14 | 3.70 | 3.79 | 2.76 | 5.27 | 9.87 | 6.43 |
| 1998 | 18.19 | 18.81 | 16.99 | 9.60 | 4.98 | 3.01 | 3.00 | 2.25 | 2.30 | 3.03 | 3.55 | 3.13 | 7.40 |
| 1999 | 5.74 | 17.98 | 16.85 | 13.32 | 8.82 | 4.37 | 2.83 | 3.18 | 3.26 | 3.56 | 2.83 | 9.91 | 7.72 |
| 2000 | 16.28 | 21.87 | 19.46 | 9.68 | 8.82 | 4.67 | 4.48 | 3.00 | 3.26 | 5.96 | 4.90 | 9.75 | 9.34 |
| 2001 | 22.89 | 18.92 | 20.52 | 13.48 | 9.09 | 5.15 | 4.24 | 3.93 | 4.58 | 2.95 | 5.61 | 4.81 | 9.68 |
| 2002 | 4.67 | 12.10 | 18.56 | 11.83 | 5.50 | 2.88 | 3.18 | 3.31 | 3.19 | 3.05 | 6.23 | 8.87 | 6.95 |
| 2003 | 14.91 | 16.40 | 18.83 | 12.52 | 5.61 | 3.19 | 2.53 | 1.33 | 1.91 | 3.71 | 1.48 | 6.41 | 7.40 |
| 2004 | 3.08 | 12.83 | 10.89 | 9.34 | 4.15 | 1.97 | 3.40 | 1.41 | 1.24 | 2.59 | 7.03 | 11.41 | 5.78 |
| 2005 | 14.22 | 13.40 | 17.14 | 13.75 | 4.57 | 2.59 | 1.93 | 1.17 | 0.89 | 1.31 | 1.41 | 4.12 | 6.38 |
| 2006 | 10.34 | 15.07 | 19.94 | 16.43 | 5.85 | 3.60 | 2.99 | 2.95 | 2.23 | 2.82 | 4.13 | 8.63 | 7.92 |
| 2007 | 16.76 | 17.35 | 20.44 | 15.26 | 7.06 | 4.31 | 3.20 | 3.17 | 3.82 | 3.93 | 3.63 | 3.60 | 8.54 |
| 2008 | 15.91 | 20.29 | 15.86 | 9.46 | 4.40 | 2.24 | 2.66 | 2.27 | 1.04 | 1.25 | 2.27 | 4.15 | 6.82 |
| 2009 | 12.79 | 24.38 | 20.33 | 12.07 | 5.98 | 3.43 | 3.36 | 2.55 | 2.52 | 4.64 | 10.69 | 16.46 | 9.93 |

CAUDALES (m³/s) EXTENDIDOS PARA LA ESTACION HIDROMETRICA DE SHEQUE

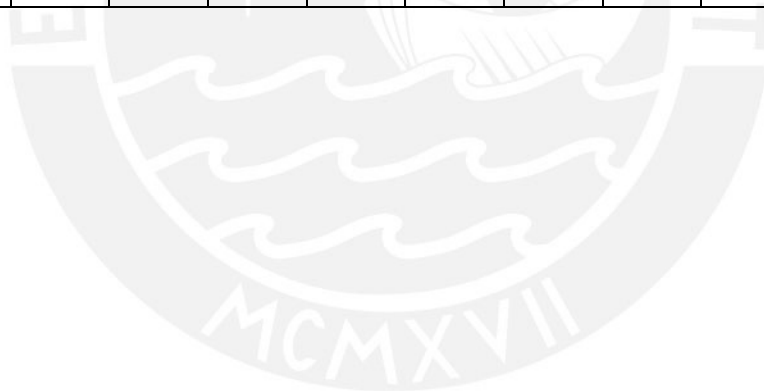
| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC | PROM |
|------|-------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|
| 2010 | 26.33 | 15.45 | 16.14 | 14.17 | 6.54 | 6.29 | 4.68 | 3.1 | 2.4 | 2.38 | 4.72 | 10.01 | 9.35 |
| 2011 | 13.35 | 24.02 | 28.62 | 21.95 | 9.33 | 5.06 | 3.94 | 3.04 | 3.9 | 5.54 | 5.64 | 5.3 | 10.81 |
| 2012 | 12.35 | 23.58 | 19.17 | 15.92 | 6.61 | 2.96 | 2.75 | 1.57 | 1.75 | 2.67 | 3.22 | 9.13 | 8.47 |
| 2013 | 3.45 | 24.59 | 24.03 | 9.97 | 5.24 | 4.79 | 4.04 | 3.91 | 4.21 | 5.22 | 5.3 | 10.33 | 8.76 |
| 2014 | 12.88 | 13.57 | 18.93 | 11.09 | 6.53 | 5.65 | 3.1 | 2.3 | 3.03 | 2.57 | 2.43 | 6.07 | 7.35 |
| 2015 | 14.45 | 16.25 | 18.42 | 12.17 | 7.31 | 2.8 | 3.92 | 2.72 | 2.07 | 3.91 | 3.4 | 4.38 | 7.65 |
| 2016 | 8.7 | 5.43 | 12.86 | 9.16 | 6.6 | 4.35 | 4.79 | 2.83 | 3.45 | 2.84 | 2.28 | 2.87 | 5.51 |
| 2017 | 3.33 | 8.68 | 14.23 | 6.41 | 3.82 | 2.87 | 3.57 | 3.71 | 4.12 | 3.13 | 3.41 | 3.73 | 5.08 |
| 2018 | 11.47 | 16.35 | 10.46 | 8.65 | 4.47 | 2.12 | 1.57 | 3.13 | 4.32 | 4.96 | 4.7 | 13.19 | 7.12 |
| 2019 | 4.29 | 16.54 | 11.12 | 7.67 | 6.07 | 2.97 | 2.22 | 2.74 | 2 | 3.33 | 4.26 | 7.77 | 5.92 |
| 2020 | 6.03 | 17.81 | 10.06 | 10.09 | 4.8 | 4.09 | 3.36 | 1.87 | 3.17 | 2.51 | 5.19 | 11.44 | 6.70 |
| 2021 | 10.39 | 13.24 | 15.76 | 16.41 | 8.84 | 5.71 | 4.71 | 2.68 | 2.45 | 1.75 | 4.64 | 10.14 | 8.06 |
| 2022 | 8.66 | 14.86 | 9.71 | 12.52 | 7.71 | 6.94 | 4.77 | 4.82 | 5.89 | 6.4 | 11.95 | 15.46 | 9.14 |
| 2023 | 22.53 | 7.24 | 15.16 | 8.25 | 5.33 | 3.05 | 2.36 | 1.33 | 1.25 | 2.47 | 3.69 | 7.78 | 6.70 |
| 2024 | 10.96 | 18.04 | 20.29 | 8.18 | 3.35 | 1.31 | 1.18 | 1.68 | 2.72 | 2.92 | 1.49 | 0.77 | 6.07 |
| 2025 | 8.57 | 19.58 | 13.82 | 6.19 | 5.23 | 4.27 | 2.8 | 1.32 | 1.51 | 3.29 | 5.34 | 5.45 | 6.45 |
| 2026 | 15.3 | 21 | 19.27 | 10.63 | 7.19 | 4.72 | 3.47 | 2.42 | 3.24 | 4.32 | 3.37 | 4.66 | 8.30 |
| 2027 | 9.49 | 20.32 | 33.06 | 17.92 | 9.06 | 4.58 | 2.89 | 3.33 | 2.61 | 5.6 | 7.82 | 6.74 | 10.29 |
| 2028 | 5.53 | 10.3 | 13.39 | 7.56 | 4.98 | 3.13 | 2.62 | 2.22 | 2.78 | 3.74 | 4.46 | 2.82 | 5.29 |
| 2029 | 7.11 | 5.46 | 7.11 | 5.51 | 2.12 | 2.85 | 1.82 | 2.08 | 2.53 | 2.36 | 4.26 | 12.1 | 4.61 |

Datos procesados con el programa HEC-4, se consideró unos 20 años de acuerdo a proyectos de características similares.

CAUDALES (m³/s) GENERADOS PARA LA CAPTACACIÓN EN LA BOCATOMA,
PROYECTO SUBCUENCA RÍO SHUNCHA CONSIDERANDO EL APOORTE DE LAS
LAGUNAS REGULADAS

| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC | PROM |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1965 | 1.27 | 4.56 | 4.23 | 1.85 | 1.44 | 1.30 | 1.70 | 1.61 | 1.87 | 1.59 | 1.46 | 1.68 | 2.05 |
| 1966 | 4.45 | 3.55 | 4.12 | 2.70 | 1.16 | 1.80 | 1.66 | 1.74 | 2.00 | 2.13 | 1.92 | 1.96 | 2.43 |
| 1967 | 1.65 | 8.62 | 8.01 | 2.69 | 1.61 | 1.12 | 1.92 | 2.26 | 2.55 | 2.72 | 2.10 | 1.44 | 3.06 |
| 1968 | 1.73 | 1.32 | 2.74 | 2.00 | 0.88 | 1.04 | 1.19 | 1.43 | 1.62 | 1.23 | 1.37 | 1.03 | 1.47 |
| 1969 | 0.87 | 2.63 | 3.49 | 3.48 | 1.47 | 0.97 | 1.39 | 1.68 | 1.90 | 1.54 | 1.72 | 4.61 | 2.15 |
| 1970 | 6.69 | 3.43 | 3.55 | 3.30 | 2.35 | 1.60 | 1.80 | 1.82 | 2.47 | 2.34 | 1.65 | 3.02 | 2.83 |
| 1971 | 4.07 | 5.45 | 7.80 | 4.38 | 2.11 | 1.60 | 1.68 | 1.96 | 2.15 | 1.54 | 1.19 | 2.03 | 3.00 |
| 1972 | 5.37 | 4.58 | 9.42 | 5.63 | 2.24 | 1.88 | 1.93 | 1.76 | 1.98 | 1.73 | 1.20 | 2.68 | 3.37 |
| 1973 | 5.86 | 8.09 | 7.78 | 6.17 | 2.40 | 1.81 | 1.95 | 1.68 | 2.37 | 2.16 | 2.24 | 3.78 | 3.86 |
| 1974 | 4.39 | 4.99 | 6.21 | 2.99 | 1.15 | 1.78 | 1.84 | 1.96 | 2.11 | 1.99 | 1.35 | 1.41 | 2.68 |
| 1975 | 2.53 | 2.74 | 7.35 | 3.18 | 2.05 | 1.72 | 1.74 | 1.86 | 2.63 | 1.58 | 1.60 | 1.30 | 2.52 |
| 1976 | 3.05 | 5.33 | 4.93 | 2.84 | 1.29 | 1.56 | 1.70 | 1.83 | 2.02 | 1.42 | 1.07 | 1.97 | 2.42 |
| 1977 | 1.83 | 6.80 | 4.33 | 2.60 | 1.93 | 1.24 | 1.57 | 1.73 | 1.97 | 1.83 | 2.57 | 2.12 | 2.54 |
| 1978 | 2.34 | 5.30 | 3.20 | 2.03 | 1.36 | 1.29 | 1.38 | 1.64 | 1.76 | 1.83 | 1.27 | 1.84 | 2.10 |
| 1979 | 1.40 | 5.15 | 6.83 | 3.38 | 1.51 | 1.19 | 1.60 | 1.71 | 2.59 | 1.37 | 1.00 | 0.32 | 2.34 |
| 1980 | 2.52 | 2.22 | 4.14 | 2.85 | 1.28 | 1.35 | 1.42 | 1.30 | 2.21 | 1.55 | 2.31 | 2.23 | 2.12 |
| 1981 | 3.00 | 8.28 | 6.75 | 2.97 | 1.55 | 1.65 | 1.90 | 1.62 | 1.89 | 2.10 | 2.23 | 2.80 | 3.06 |
| 1982 | 2.54 | 8.66 | 3.76 | 2.00 | 1.74 | 1.21 | 1.62 | 2.46 | 1.86 | 1.98 | 2.46 | 1.73 | 2.67 |
| 1983 | 2.65 | 1.64 | 4.19 | 4.16 | 1.44 | 1.73 | 1.44 | 1.55 | 1.91 | 1.40 | 1.04 | 1.99 | 2.10 |
| 1984 | 2.81 | 9.72 | 7.63 | 4.65 | 2.38 | 1.91 | 1.69 | 1.76 | 2.18 | 2.25 | 1.88 | 3.84 | 3.56 |
| 1985 | 2.29 | 4.03 | 5.60 | 4.39 | 2.10 | 1.89 | 2.04 | 1.71 | 2.04 | 1.30 | 1.39 | 2.49 | 2.61 |
| 1986 | 5.11 | 5.68 | 7.61 | 5.73 | 2.77 | 2.15 | 1.98 | 1.80 | 2.09 | 1.65 | 1.42 | 1.90 | 3.32 |
| 1987 | 5.27 | 5.40 | 3.53 | 1.85 | 1.11 | 0.99 | 1.54 | 1.54 | 1.65 | 1.51 | 1.47 | 2.56 | 2.37 |
| 1988 | 4.30 | 6.15 | 3.82 | 4.45 | 2.03 | 1.71 | 1.64 | 1.46 | 1.68 | 1.50 | 0.91 | 0.97 | 2.55 |
| 1989 | 4.59 | 7.14 | 6.72 | 4.57 | 2.11 | 1.35 | 1.75 | 1.44 | 1.84 | 1.87 | 1.84 | 2.09 | 3.11 |
| 1990 | 2.93 | 1.76 | 2.09 | 1.44 | 0.58 | 1.67 | 1.22 | 1.44 | 1.83 | 1.65 | 3.36 | 2.61 | 1.88 |
| 1991 | 2.32 | 2.93 | 5.81 | 2.69 | 2.12 | 1.55 | 1.80 | 1.49 | 1.81 | 1.69 | 1.47 | 0.95 | 2.22 |
| 1992 | 1.74 | 1.01 | 2.75 | 1.96 | 1.03 | 0.87 | 1.27 | 1.44 | 1.49 | 1.63 | 0.96 | 0.64 | 1.40 |
| 1993 | 2.37 | 4.65 | 5.67 | 3.87 | 2.17 | 1.23 | 1.55 | 1.58 | 1.95 | 1.94 | 3.47 | 4.64 | 2.92 |
| 1994 | 5.42 | 6.05 | 5.97 | 5.93 | 3.10 | 2.36 | 1.96 | 1.83 | 2.24 | 1.56 | 1.86 | 1.89 | 3.34 |
| 1995 | 2.94 | 2.56 | 4.19 | 3.93 | 1.51 | 1.31 | 1.58 | 1.71 | 1.90 | 1.46 | 1.91 | 2.34 | 2.28 |
| 1996 | 4.13 | 6.39 | 5.74 | 4.12 | 1.88 | 1.45 | 1.56 | 1.85 | 1.96 | 1.50 | 1.55 | 1.23 | 2.78 |
| 1997 | 2.50 | 5.01 | 3.31 | 1.55 | 1.42 | 1.60 | 2.00 | 2.04 | 2.30 | 1.53 | 1.98 | 3.01 | 2.35 |
| 1998 | 5.50 | 5.78 | 5.43 | 3.09 | 1.54 | 1.26 | 1.66 | 1.60 | 1.86 | 1.61 | 1.46 | 0.98 | 2.65 |
| 1999 | 1.76 | 5.53 | 5.38 | 4.20 | 2.70 | 1.67 | 1.61 | 1.88 | 2.14 | 1.77 | 1.25 | 3.02 | 2.74 |
| 2000 | 4.93 | 6.70 | 6.17 | 3.11 | 2.70 | 1.76 | 2.10 | 1.83 | 2.14 | 2.49 | 1.87 | 2.97 | 3.23 |
| 2001 | 6.91 | 5.81 | 6.49 | 4.25 | 2.78 | 1.91 | 2.03 | 2.11 | 2.54 | 1.58 | 2.08 | 1.49 | 3.33 |
| 2002 | 1.43 | 3.76 | 5.90 | 3.76 | 1.70 | 1.22 | 1.71 | 1.92 | 2.12 | 1.61 | 2.27 | 2.71 | 2.51 |
| 2003 | 4.51 | 5.06 | 5.98 | 3.96 | 1.73 | 1.32 | 1.52 | 1.32 | 1.74 | 1.81 | 0.84 | 1.97 | 2.65 |
| 2004 | 0.96 | 3.98 | 3.59 | 3.01 | 1.29 | 0.95 | 1.78 | 1.35 | 1.54 | 1.48 | 2.51 | 3.47 | 2.16 |
| 2005 | 4.31 | 4.15 | 5.47 | 4.33 | 1.42 | 1.14 | 1.34 | 1.28 | 1.43 | 1.09 | 0.82 | 1.28 | 2.34 |
| 2006 | 3.14 | 4.66 | 6.31 | 5.14 | 1.81 | 1.44 | 1.65 | 1.81 | 1.83 | 1.54 | 1.64 | 2.64 | 2.80 |

| | | | | | | | | | | | | | |
|------|------|------|-------|------|------|------|------|------|------|------|------|------|------|
| 2007 | 5.07 | 5.34 | 6.46 | 4.79 | 2.17 | 1.65 | 1.72 | 1.88 | 2.31 | 1.88 | 1.49 | 1.12 | 2.99 |
| 2008 | 4.81 | 6.23 | 5.09 | 3.04 | 1.37 | 1.03 | 1.56 | 1.61 | 1.48 | 1.07 | 1.08 | 1.29 | 2.47 |
| 2009 | 3.88 | 7.46 | 6.43 | 3.83 | 1.84 | 1.39 | 1.77 | 1.69 | 1.92 | 2.09 | 3.61 | 4.99 | 3.41 |
| 2010 | 7.95 | 4.77 | 5.17 | 4.46 | 2.01 | 2.25 | 2.16 | 1.86 | 1.89 | 1.41 | 1.81 | 3.05 | 3.23 |
| 2011 | 4.04 | 7.35 | 8.92 | 6.80 | 2.85 | 1.88 | 1.94 | 1.84 | 2.34 | 2.36 | 2.09 | 1.63 | 3.67 |
| 2012 | 3.74 | 7.22 | 6.08 | 4.99 | 2.03 | 1.25 | 1.58 | 1.40 | 1.69 | 1.50 | 1.36 | 2.79 | 2.97 |
| 2013 | 1.07 | 7.52 | 7.54 | 3.20 | 1.62 | 1.80 | 1.97 | 2.10 | 2.43 | 2.27 | 1.99 | 3.15 | 3.05 |
| 2014 | 3.90 | 4.21 | 6.01 | 3.53 | 2.01 | 2.06 | 1.69 | 1.62 | 2.08 | 1.47 | 1.13 | 1.87 | 2.63 |
| 2015 | 4.38 | 5.01 | 5.86 | 3.86 | 2.24 | 1.20 | 1.93 | 1.74 | 1.79 | 1.87 | 1.42 | 1.36 | 2.72 |
| 2016 | 2.65 | 1.76 | 4.18 | 2.95 | 2.03 | 1.67 | 2.20 | 1.77 | 2.20 | 1.55 | 1.08 | 0.90 | 2.08 |
| 2017 | 1.03 | 2.74 | 4.60 | 2.13 | 1.19 | 1.22 | 1.83 | 2.04 | 2.40 | 1.64 | 1.42 | 1.16 | 1.95 |
| 2018 | 3.48 | 5.04 | 3.46 | 2.80 | 1.39 | 0.99 | 1.23 | 1.86 | 2.46 | 2.19 | 1.81 | 4.01 | 2.56 |
| 2019 | 1.32 | 5.10 | 3.66 | 2.51 | 1.87 | 1.25 | 1.42 | 1.75 | 1.77 | 1.70 | 1.68 | 2.38 | 2.20 |
| 2020 | 1.84 | 5.48 | 3.34 | 3.23 | 1.49 | 1.59 | 1.77 | 1.49 | 2.12 | 1.45 | 1.96 | 3.48 | 2.44 |
| 2021 | 3.15 | 4.11 | 5.06 | 5.13 | 2.70 | 2.07 | 2.17 | 1.73 | 1.90 | 1.22 | 1.79 | 3.09 | 2.84 |
| 2022 | 2.63 | 4.59 | 3.24 | 3.96 | 2.36 | 2.44 | 2.19 | 2.37 | 2.94 | 2.62 | 3.99 | 4.69 | 3.17 |
| 2023 | 6.81 | 2.30 | 4.87 | 2.68 | 1.65 | 1.27 | 1.47 | 1.32 | 1.54 | 1.44 | 1.50 | 2.38 | 2.44 |
| 2024 | 3.33 | 5.55 | 6.42 | 2.66 | 1.05 | 0.75 | 1.11 | 1.43 | 1.98 | 1.58 | 0.84 | 0.27 | 2.25 |
| 2025 | 2.61 | 6.01 | 4.47 | 2.06 | 1.62 | 1.64 | 1.60 | 1.32 | 1.62 | 1.69 | 2.00 | 1.68 | 2.36 |
| 2026 | 4.63 | 6.44 | 6.11 | 3.40 | 2.21 | 1.78 | 1.80 | 1.65 | 2.14 | 2.00 | 1.41 | 1.44 | 2.92 |
| 2027 | 2.88 | 6.24 | 10.26 | 5.59 | 2.77 | 1.73 | 1.62 | 1.92 | 1.95 | 2.38 | 2.75 | 2.07 | 3.51 |
| 2028 | 1.69 | 3.22 | 4.34 | 2.47 | 1.54 | 1.30 | 1.54 | 1.59 | 2.00 | 1.82 | 1.74 | 0.89 | 2.01 |
| 2029 | 2.17 | 1.77 | 2.45 | 1.86 | 0.68 | 1.21 | 1.30 | 1.55 | 1.92 | 1.41 | 1.68 | 3.68 | 1.81 |





Cálculo del factor de planta $Q=1.71\text{m}^3/\text{s}$

1. Parámetros de entrada

| Parámetros de entrada | |
|------------------------------------|-------|
| Caudal (m ³ /s) | 1.71 |
| Longitud de Canal (m) | 7400 |
| Longitud de la tubería Forzada (m) | 735 |
| Pendiente del canal (m) | 0.001 |
| Diámetro de la tubería forzada (m) | 0.63 |

2. Cálculo de pérdidas de energía en la tubería forzada

| En la tubería forzada | |
|-------------------------------------|------------|
| Área del conducto (m ²) | 0.31 |
| Velocidad (m/s) | 5.49 |
| Re | 3455935.91 |
| f | 0.01 |
| Pérdida en el túnel (m) | 21.76 |

3. Cálculo de pérdidas de energía en el canal

| | |
|---------------------|---------------|
| En el canal | EC. Bernoulli |
| Pérdida en el canal | 7.400 |

4. Pérdida total, altura neta y potencia generada

| | |
|------------------------|--------|
| Pérdida total (m) | 29.16 |
| Altura neta (m) | 500.84 |
| Potencia generada (kW) | 7141.4 |

5. Tabla de caudales captados considerando el caudal ecológico

| AÑO | CAUDALES CONSIDERANDO EL CAUDAL ECOLÓGICO (m³/s) | | | | | | | | | | |
|------|--|------|------|------|------|------|------|------|------|------|------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Oct | Nov | Dic |
| 1965 | 1.14 | 4.10 | 3.81 | 1.67 | 1.23 | 1.10 | 1.44 | 1.37 | 1.35 | 1.24 | 1.51 |
| 1966 | 4.01 | 3.19 | 3.71 | 2.43 | 0.99 | 1.53 | 1.41 | 1.48 | 1.81 | 1.63 | 1.76 |
| 1967 | 1.49 | 7.76 | 7.21 | 2.42 | 1.37 | 0.95 | 1.63 | 1.92 | 2.31 | 1.78 | 1.30 |
| 1968 | 1.55 | 1.19 | 2.46 | 1.80 | 0.75 | 0.89 | 1.02 | 1.21 | 1.05 | 1.17 | 0.93 |
| 1969 | 0.78 | 2.36 | 3.14 | 3.13 | 1.25 | 0.83 | 1.18 | 1.43 | 1.31 | 1.46 | 4.15 |
| 1970 | 6.02 | 3.09 | 3.20 | 2.97 | 2.00 | 1.36 | 1.53 | 1.54 | 1.99 | 1.40 | 2.72 |
| 1971 | 3.67 | 4.90 | 7.02 | 3.94 | 1.79 | 1.36 | 1.43 | 1.66 | 1.31 | 1.02 | 1.83 |
| 1972 | 4.83 | 4.12 | 8.48 | 5.07 | 1.90 | 1.60 | 1.64 | 1.50 | 1.47 | 1.02 | 2.41 |
| 1973 | 5.27 | 7.28 | 7.00 | 5.56 | 2.04 | 1.54 | 1.66 | 1.42 | 1.83 | 1.90 | 3.40 |
| 1974 | 3.95 | 4.49 | 5.59 | 2.69 | 0.98 | 1.52 | 1.57 | 1.67 | 1.69 | 1.15 | 1.27 |
| 1975 | 2.27 | 2.46 | 6.61 | 2.86 | 1.74 | 1.46 | 1.48 | 1.58 | 1.34 | 1.36 | 1.17 |
| 1976 | 2.74 | 4.80 | 4.44 | 2.56 | 1.10 | 1.32 | 1.45 | 1.56 | 1.21 | 0.91 | 1.77 |
| 1977 | 1.65 | 6.12 | 3.89 | 2.34 | 1.64 | 1.06 | 1.34 | 1.47 | 1.56 | 2.19 | 1.91 |
| 1978 | 2.11 | 4.77 | 2.88 | 1.82 | 1.16 | 1.09 | 1.18 | 1.39 | 1.56 | 1.08 | 1.65 |
| 1979 | 1.26 | 4.64 | 6.15 | 3.04 | 1.28 | 1.01 | 1.36 | 1.46 | 1.17 | 0.85 | 0.29 |
| 1980 | 2.27 | 2.00 | 3.73 | 2.57 | 1.08 | 1.15 | 1.20 | 1.11 | 1.32 | 1.96 | 2.01 |
| 1981 | 2.70 | 7.45 | 6.07 | 2.68 | 1.31 | 1.40 | 1.62 | 1.37 | 1.79 | 1.90 | 2.52 |
| 1982 | 2.29 | 7.79 | 3.39 | 1.80 | 1.48 | 1.02 | 1.37 | 2.09 | 1.68 | 2.09 | 1.56 |
| 1983 | 2.39 | 1.48 | 3.77 | 3.75 | 1.22 | 1.47 | 1.23 | 1.31 | 1.19 | 0.89 | 1.79 |
| 1984 | 2.52 | 8.75 | 6.87 | 4.19 | 2.02 | 1.62 | 1.44 | 1.50 | 1.91 | 1.60 | 3.45 |
| 1985 | 2.06 | 3.63 | 5.04 | 3.95 | 1.78 | 1.60 | 1.73 | 1.46 | 1.10 | 1.18 | 2.24 |
| 1986 | 4.60 | 5.11 | 6.85 | 5.15 | 2.35 | 1.83 | 1.68 | 1.53 | 1.40 | 1.20 | 1.71 |
| 1987 | 4.75 | 4.86 | 3.17 | 1.67 | 0.95 | 0.85 | 1.31 | 1.31 | 1.29 | 1.25 | 2.30 |
| 1988 | 3.87 | 5.54 | 3.43 | 4.01 | 1.73 | 1.45 | 1.39 | 1.24 | 1.27 | 0.77 | 0.87 |
| 1989 | 4.13 | 6.43 | 6.05 | 4.11 | 1.80 | 1.15 | 1.49 | 1.22 | 1.59 | 1.56 | 1.88 |
| 1990 | 2.64 | 1.58 | 1.88 | 1.29 | 0.49 | 1.42 | 1.04 | 1.22 | 1.40 | 2.86 | 2.34 |
| 1991 | 2.09 | 2.64 | 5.23 | 2.42 | 1.80 | 1.31 | 1.53 | 1.27 | 1.44 | 1.25 | 0.86 |
| 1992 | 1.56 | 0.91 | 2.48 | 1.77 | 0.87 | 0.74 | 1.08 | 1.22 | 1.39 | 0.81 | 0.57 |
| 1993 | 2.13 | 4.18 | 5.11 | 3.48 | 1.85 | 1.05 | 1.32 | 1.34 | 1.65 | 2.95 | 4.17 |
| 1994 | 4.88 | 5.44 | 5.37 | 5.33 | 2.63 | 2.00 | 1.66 | 1.55 | 1.32 | 1.58 | 1.70 |
| 1995 | 2.64 | 2.30 | 3.77 | 3.54 | 1.28 | 1.11 | 1.35 | 1.45 | 1.24 | 1.62 | 2.10 |
| 1996 | 3.72 | 5.75 | 5.17 | 3.71 | 1.60 | 1.23 | 1.33 | 1.57 | 1.27 | 1.32 | 1.10 |
| 1997 | 2.25 | 4.51 | 2.97 | 1.40 | 1.21 | 1.36 | 1.70 | 1.73 | 1.30 | 1.68 | 2.71 |
| 1998 | 4.95 | 5.20 | 4.88 | 2.78 | 1.31 | 1.07 | 1.41 | 1.36 | 1.37 | 1.24 | 0.88 |
| 1999 | 1.58 | 4.98 | 4.84 | 3.78 | 2.29 | 1.42 | 1.37 | 1.60 | 1.50 | 1.06 | 2.72 |
| 2000 | 4.43 | 6.03 | 5.55 | 2.80 | 2.29 | 1.50 | 1.79 | 1.55 | 2.12 | 1.59 | 2.68 |
| 2001 | 6.22 | 5.23 | 5.84 | 3.83 | 2.36 | 1.62 | 1.73 | 1.79 | 1.35 | 1.77 | 1.34 |
| 2002 | 1.29 | 3.39 | 5.31 | 3.38 | 1.44 | 1.04 | 1.46 | 1.63 | 1.37 | 1.93 | 2.44 |
| 2003 | 4.06 | 4.55 | 5.38 | 3.57 | 1.47 | 1.12 | 1.29 | 1.12 | 1.54 | 0.71 | 1.77 |
| 2004 | 0.86 | 3.58 | 3.23 | 2.71 | 1.10 | 0.81 | 1.51 | 1.15 | 1.25 | 2.13 | 3.12 |
| 2005 | 3.88 | 3.74 | 4.92 | 3.90 | 1.21 | 0.97 | 1.14 | 1.08 | 0.93 | 0.70 | 1.15 |
| 2006 | 2.83 | 4.19 | 5.68 | 4.63 | 1.53 | 1.22 | 1.41 | 1.54 | 1.31 | 1.39 | 2.37 |
| 2007 | 4.56 | 4.81 | 5.82 | 4.31 | 1.84 | 1.41 | 1.46 | 1.60 | 1.60 | 1.26 | 1.01 |
| 2008 | 4.33 | 5.60 | 4.58 | 2.74 | 1.16 | 0.88 | 1.32 | 1.37 | 0.91 | 0.92 | 1.16 |
| 2009 | 3.49 | 6.71 | 5.79 | 3.45 | 1.57 | 1.18 | 1.50 | 1.44 | 1.78 | 3.07 | 4.49 |
| 2010 | 7.15 | 4.29 | 4.65 | 4.01 | 1.71 | 1.91 | 1.84 | 1.58 | 1.20 | 1.54 | 2.75 |
| 2011 | 3.64 | 6.61 | 8.03 | 6.12 | 2.42 | 1.60 | 1.65 | 1.56 | 2.01 | 1.78 | 1.47 |
| 2012 | 3.37 | 6.49 | 5.47 | 4.49 | 1.73 | 1.06 | 1.35 | 1.19 | 1.27 | 1.16 | 2.51 |
| 2013 | 0.96 | 6.77 | 6.79 | 2.88 | 1.38 | 1.53 | 1.67 | 1.78 | 1.93 | 1.69 | 2.83 |
| 2014 | 3.51 | 3.79 | 5.41 | 3.18 | 1.71 | 1.75 | 1.43 | 1.37 | 1.25 | 0.96 | 1.68 |
| 2015 | 3.94 | 4.51 | 5.27 | 3.47 | 1.91 | 1.02 | 1.64 | 1.48 | 1.59 | 1.20 | 1.22 |
| 2016 | 2.38 | 1.58 | 3.76 | 2.66 | 1.73 | 1.42 | 1.87 | 1.51 | 1.32 | 0.92 | 0.81 |
| 2017 | 0.93 | 2.46 | 4.14 | 1.91 | 1.02 | 1.04 | 1.55 | 1.73 | 1.39 | 1.21 | 1.05 |
| 2018 | 3.13 | 4.54 | 3.12 | 2.52 | 1.18 | 0.85 | 1.04 | 1.59 | 1.86 | 1.54 | 3.61 |
| 2019 | 1.19 | 4.59 | 3.29 | 2.26 | 1.59 | 1.06 | 1.21 | 1.49 | 1.44 | 1.42 | 2.14 |
| 2020 | 1.66 | 4.93 | 3.01 | 2.91 | 1.27 | 1.35 | 1.50 | 1.26 | 1.23 | 1.66 | 3.13 |
| 2021 | 2.84 | 3.70 | 4.55 | 4.62 | 2.30 | 1.76 | 1.85 | 1.47 | 1.04 | 1.52 | 2.78 |
| 2022 | 2.37 | 4.13 | 2.91 | 3.57 | 2.01 | 2.08 | 1.86 | 2.02 | 2.23 | 3.39 | 4.22 |
| 2023 | 6.12 | 2.07 | 4.39 | 2.41 | 1.40 | 1.08 | 1.25 | 1.12 | 1.22 | 1.28 | 2.14 |
| 2024 | 2.99 | 4.99 | 5.78 | 2.39 | 0.90 | 0.64 | 0.94 | 1.21 | 1.34 | 0.72 | 0.24 |
| 2025 | 2.35 | 5.41 | 4.02 | 1.85 | 1.38 | 1.40 | 1.36 | 1.12 | 1.43 | 1.70 | 1.51 |
| 2026 | 4.17 | 5.80 | 5.50 | 3.06 | 1.88 | 1.51 | 1.53 | 1.40 | 1.70 | 1.20 | 1.30 |
| 2027 | 2.60 | 5.61 | 9.23 | 5.03 | 2.35 | 1.47 | 1.38 | 1.64 | 2.02 | 2.33 | 1.86 |
| 2028 | 1.52 | 2.90 | 3.91 | 2.23 | 1.31 | 1.10 | 1.31 | 1.35 | 1.55 | 1.48 | 0.80 |
| 2029 | 1.95 | 1.59 | 2.21 | 1.67 | 0.58 | 1.03 | 1.11 | 1.32 | 1.20 | 1.42 | 3.31 |

6. Tabla de caudales turbinables

| AÑO | CAUDALES TURBINABLES (m³/s) | | | | | | | | | | | |
|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Sep | Oct | Nov | Dic |
| 1965 | 1.14 | 1.71 | 1.71 | 1.67 | 1.23 | 1.10 | 1.44 | 1.37 | 1.59 | 1.35 | 1.24 | 1.51 |
| 1966 | 1.71 | 1.71 | 1.71 | 1.71 | 0.99 | 1.53 | 1.41 | 1.48 | 1.70 | 1.71 | 1.63 | 1.71 |
| 1967 | 1.49 | 1.71 | 1.71 | 1.71 | 1.37 | 0.95 | 1.63 | 1.71 | 1.71 | 1.71 | 1.71 | 1.30 |
| 1968 | 1.55 | 1.19 | 1.71 | 1.71 | 0.75 | 0.89 | 1.02 | 1.21 | 1.38 | 1.05 | 1.17 | 0.93 |
| 1969 | 0.78 | 1.71 | 1.71 | 1.71 | 1.25 | 0.83 | 1.18 | 1.43 | 1.62 | 1.31 | 1.46 | 1.71 |
| 1970 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.36 | 1.53 | 1.54 | 1.71 | 1.71 | 1.40 | 1.71 |
| 1971 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.36 | 1.43 | 1.66 | 1.71 | 1.31 | 1.02 | 1.71 |
| 1972 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.60 | 1.64 | 1.50 | 1.68 | 1.47 | 1.02 | 1.71 |
| 1973 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.54 | 1.66 | 1.42 | 1.71 | 1.71 | 1.71 | 1.71 |
| 1974 | 1.71 | 1.71 | 1.71 | 1.71 | 0.98 | 1.52 | 1.57 | 1.67 | 1.71 | 1.69 | 1.15 | 1.27 |
| 1975 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.46 | 1.48 | 1.58 | 1.71 | 1.34 | 1.36 | 1.17 |
| 1976 | 1.71 | 1.71 | 1.71 | 1.71 | 1.10 | 1.32 | 1.45 | 1.56 | 1.71 | 1.21 | 0.91 | 1.71 |
| 1977 | 1.65 | 1.71 | 1.71 | 1.71 | 1.64 | 1.06 | 1.34 | 1.47 | 1.67 | 1.56 | 1.71 | 1.71 |
| 1978 | 1.71 | 1.71 | 1.71 | 1.71 | 1.16 | 1.09 | 1.18 | 1.39 | 1.49 | 1.56 | 1.08 | 1.65 |
| 1979 | 1.26 | 1.71 | 1.71 | 1.71 | 1.28 | 1.01 | 1.36 | 1.46 | 1.71 | 1.17 | 0.85 | 0.29 |
| 1980 | 1.71 | 1.71 | 1.71 | 1.71 | 1.08 | 1.15 | 1.20 | 1.11 | 1.71 | 1.32 | 1.71 | 1.71 |
| 1981 | 1.71 | 1.71 | 1.71 | 1.71 | 1.31 | 1.40 | 1.62 | 1.37 | 1.61 | 1.71 | 1.71 | 1.71 |
| 1982 | 1.71 | 1.71 | 1.71 | 1.71 | 1.48 | 1.02 | 1.37 | 1.71 | 1.59 | 1.68 | 1.71 | 1.56 |
| 1983 | 1.71 | 1.48 | 1.71 | 1.71 | 1.22 | 1.47 | 1.23 | 1.31 | 1.62 | 1.19 | 0.89 | 1.71 |
| 1984 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.62 | 1.44 | 1.50 | 1.71 | 1.71 | 1.60 | 1.71 |
| 1985 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.60 | 1.71 | 1.46 | 1.71 | 1.10 | 1.18 | 1.71 |
| 1986 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.68 | 1.53 | 1.71 | 1.40 | 1.71 |
| 1987 | 1.71 | 1.71 | 1.71 | 1.67 | 0.95 | 0.85 | 1.31 | 1.31 | 1.40 | 1.29 | 1.25 | 1.71 |
| 1988 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.45 | 1.39 | 1.24 | 1.43 | 1.27 | 0.77 | 0.87 |
| 1989 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.15 | 1.49 | 1.22 | 1.57 | 1.59 | 1.56 | 1.71 |
| 1990 | 1.71 | 1.58 | 1.71 | 1.29 | 0.49 | 1.42 | 1.04 | 1.22 | 1.56 | 1.40 | 1.71 | 1.71 |
| 1991 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.31 | 1.53 | 1.27 | 1.54 | 1.44 | 1.25 | 0.86 |
| 1992 | 1.56 | 0.91 | 1.71 | 1.71 | 0.87 | 0.74 | 1.08 | 1.22 | 1.26 | 1.39 | 0.81 | 0.57 |
| 1993 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.05 | 1.32 | 1.34 | 1.65 | 1.65 | 1.71 | 1.71 |
| 1994 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.66 | 1.55 | 1.71 | 1.32 | 1.58 | 1.70 |
| 1995 | 1.71 | 1.71 | 1.71 | 1.71 | 1.28 | 1.11 | 1.35 | 1.45 | 1.62 | 1.24 | 1.62 | 1.71 |
| 1996 | 1.71 | 1.71 | 1.71 | 1.71 | 1.60 | 1.23 | 1.33 | 1.57 | 1.67 | 1.27 | 1.32 | 1.10 |
| 1997 | 1.71 | 1.71 | 1.71 | 1.40 | 1.21 | 1.36 | 1.70 | 1.71 | 1.71 | 1.30 | 1.68 | 1.71 |
| 1998 | 1.71 | 1.71 | 1.71 | 1.71 | 1.31 | 1.07 | 1.41 | 1.36 | 1.58 | 1.37 | 1.24 | 0.88 |
| 1999 | 1.58 | 1.71 | 1.71 | 1.71 | 1.71 | 1.42 | 1.37 | 1.60 | 1.71 | 1.50 | 1.06 | 1.71 |
| 2000 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.50 | 1.71 | 1.55 | 1.71 | 1.71 | 1.59 | 1.71 |
| 2001 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.62 | 1.71 | 1.71 | 1.71 | 1.35 | 1.71 | 1.34 |
| 2002 | 1.29 | 1.71 | 1.71 | 1.71 | 1.44 | 1.04 | 1.46 | 1.63 | 1.71 | 1.37 | 1.71 | 1.71 |
| 2003 | 1.71 | 1.71 | 1.71 | 1.71 | 1.47 | 1.12 | 1.29 | 1.12 | 1.48 | 1.54 | 0.71 | 1.71 |
| 2004 | 0.86 | 1.71 | 1.71 | 1.71 | 1.10 | 0.81 | 1.51 | 1.15 | 1.31 | 1.25 | 1.71 | 1.71 |
| 2005 | 1.71 | 1.71 | 1.71 | 1.71 | 1.21 | 0.97 | 1.14 | 1.08 | 1.22 | 0.93 | 0.70 | 1.15 |
| 2006 | 1.71 | 1.71 | 1.71 | 1.71 | 1.53 | 1.22 | 1.41 | 1.54 | 1.56 | 1.31 | 1.39 | 1.71 |
| 2007 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.41 | 1.46 | 1.60 | 1.71 | 1.60 | 1.26 | 1.01 |
| 2008 | 1.71 | 1.71 | 1.71 | 1.71 | 1.16 | 0.88 | 1.32 | 1.37 | 1.26 | 0.91 | 0.92 | 1.16 |
| 2009 | 1.71 | 1.71 | 1.71 | 1.71 | 1.57 | 1.18 | 1.50 | 1.44 | 1.63 | 1.71 | 1.71 | 1.71 |
| 2010 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.58 | 1.60 | 1.20 | 1.54 | 1.71 |
| 2011 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.60 | 1.65 | 1.56 | 1.71 | 1.71 | 1.71 | 1.47 |
| 2012 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.06 | 1.35 | 1.19 | 1.44 | 1.27 | 1.16 | 1.71 |
| 2013 | 0.96 | 1.71 | 1.71 | 1.71 | 1.38 | 1.53 | 1.67 | 1.71 | 1.71 | 1.71 | 1.69 | 1.71 |
| 2014 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.43 | 1.37 | 1.71 | 1.25 | 0.96 | 1.68 |
| 2015 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.02 | 1.64 | 1.48 | 1.52 | 1.59 | 1.20 | 1.22 |
| 2016 | 1.71 | 1.58 | 1.71 | 1.71 | 1.71 | 1.42 | 1.71 | 1.51 | 1.71 | 1.32 | 0.92 | 0.81 |
| 2017 | 0.93 | 1.71 | 1.71 | 1.71 | 1.02 | 1.04 | 1.55 | 1.71 | 1.71 | 1.39 | 1.21 | 1.05 |
| 2018 | 1.71 | 1.71 | 1.71 | 1.71 | 1.18 | 0.85 | 1.04 | 1.59 | 1.71 | 1.71 | 1.54 | 1.71 |
| 2019 | 1.19 | 1.71 | 1.71 | 1.71 | 1.59 | 1.06 | 1.21 | 1.49 | 1.50 | 1.44 | 1.42 | 1.71 |
| 2020 | 1.66 | 1.71 | 1.71 | 1.71 | 1.27 | 1.35 | 1.50 | 1.26 | 1.71 | 1.23 | 1.66 | 1.71 |
| 2021 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.47 | 1.62 | 1.04 | 1.52 | 1.71 |
| 2022 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 |
| 2023 | 1.71 | 1.71 | 1.71 | 1.71 | 1.40 | 1.08 | 1.25 | 1.12 | 1.31 | 1.22 | 1.28 | 1.71 |
| 2024 | 1.71 | 1.71 | 1.71 | 1.71 | 0.90 | 0.64 | 0.94 | 1.21 | 1.68 | 1.34 | 0.72 | 0.00 |
| 2025 | 1.71 | 1.71 | 1.71 | 1.71 | 1.38 | 1.40 | 1.36 | 1.12 | 1.38 | 1.43 | 1.70 | 1.51 |
| 2026 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.51 | 1.53 | 1.40 | 1.71 | 1.70 | 1.20 | 1.30 |
| 2027 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.47 | 1.38 | 1.64 | 1.66 | 1.71 | 1.71 | 1.71 |
| 2028 | 1.52 | 1.71 | 1.71 | 1.71 | 1.31 | 1.10 | 1.31 | 1.35 | 1.70 | 1.55 | 1.48 | 0.80 |
| 2029 | 1.71 | 1.59 | 1.71 | 1.67 | 0.58 | 1.03 | 1.11 | 1.32 | 1.64 | 1.20 | 1.42 | 1.71 |

Los caudales turbinables se obtuvieron bajo la condición: si $Q_{captado} > Q_{diseño}$ entonces el caudal turbinable será el $Q_{diseño}$. En caso contrario será el $Q_{captado}$.

7. Tabla de potencias efectivas

| AÑO | POTENCIAS EFECTIVAS (kW) | | | | | | | | | | | |
|------|--------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Sep | Oct | Nov | Dic |
| 1965 | 4768.10 | 7141.42 | 7141.42 | 6954.19 | 5116.25 | 4609.42 | 6023.75 | 5701.44 | 6630.12 | 5633.75 | 5180.00 | 6322.90 |
| 1966 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 4134.10 | 6381.57 | 5906.32 | 6160.49 | 7089.17 | 7141.42 | 6813.36 | 7141.42 |
| 1967 | 6214.96 | 7141.42 | 7141.42 | 7141.42 | 5714.08 | 3958.21 | 6813.74 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 5429.92 |
| 1968 | 6486.24 | 4967.21 | 7141.42 | 7141.42 | 3130.59 | 3702.00 | 4240.93 | 5071.58 | 5765.40 | 4374.03 | 4870.41 | 3870.03 |
| 1969 | 3264.73 | 7141.42 | 7141.42 | 7141.42 | 5201.66 | 3445.78 | 4934.84 | 5968.33 | 6758.23 | 5452.27 | 6108.77 | 7141.42 |
| 1970 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 5676.98 | 6397.39 | 6448.73 | 7141.42 | 7141.42 | 5852.56 | 7141.42 |
| 1971 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 5687.66 | 5970.37 | 6950.49 | 7141.42 | 5484.29 | 4240.55 | 7141.42 |
| 1972 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 6680.48 | 6835.09 | 6245.90 | 7025.12 | 6124.83 | 4251.22 | 7141.42 |
| 1973 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 6413.60 | 6920.50 | 5946.98 | 7141.42 | 7141.42 | 7141.42 | 7141.42 |
| 1974 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 4091.39 | 6328.19 | 6546.85 | 6961.16 | 7141.42 | 7053.60 | 4806.35 | 5316.89 |
| 1975 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 6114.68 | 6173.21 | 6598.19 | 7141.42 | 5612.40 | 5681.75 | 4876.05 |
| 1976 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 4582.47 | 5527.52 | 6045.10 | 6512.79 | 7141.42 | 5046.59 | 3792.17 | 7141.42 |
| 1977 | 6881.87 | 7141.42 | 7141.42 | 7141.42 | 6845.70 | 4417.26 | 5575.37 | 6139.14 | 6993.09 | 6509.15 | 7141.42 | 7141.42 |
| 1978 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 4828.01 | 4566.72 | 4913.49 | 5818.88 | 6235.13 | 6498.47 | 4518.11 | 6910.69 |
| 1979 | 5265.46 | 7141.42 | 7141.42 | 7141.42 | 5351.11 | 4225.10 | 5671.45 | 6085.76 | 7141.42 | 4875.79 | 3546.63 | 1191.09 |
| 1980 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 4529.09 | 4790.91 | 5030.92 | 4623.21 | 7141.42 | 5494.97 | 7141.42 | 7141.42 |
| 1981 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 5489.90 | 5847.79 | 6749.69 | 5733.47 | 6715.53 | 7141.42 | 7141.42 | 7141.42 |
| 1982 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 6162.46 | 4278.48 | 5735.51 | 7141.42 | 6619.45 | 7021.58 | 7141.42 | 6503.76 |
| 1983 | 7141.42 | 6165.39 | 7141.42 | 7141.42 | 5094.90 | 6125.35 | 5116.32 | 5487.93 | 6779.58 | 4971.87 | 3706.77 | 7141.42 |
| 1984 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 6776.57 | 6013.07 | 6256.57 | 7141.42 | 7141.42 | 6674.58 | 7141.42 |
| 1985 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 6701.84 | 7141.42 | 6085.76 | 7141.42 | 4608.90 | 4923.79 | 7141.42 |
| 1986 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7027.25 | 6384.68 | 7141.42 | 5857.94 | 5030.54 | 7141.42 |
| 1987 | 7141.42 | 7141.42 | 7141.42 | 6965.50 | 3952.61 | 3531.19 | 5468.62 | 5477.26 | 5840.13 | 5377.54 | 5212.03 | 7141.42 |
| 1988 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 6061.30 | 5820.91 | 5189.02 | 5957.56 | 5313.48 | 3215.69 | 3632.66 |
| 1989 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 4801.58 | 6205.23 | 5103.61 | 6544.72 | 6626.58 | 6535.80 | 7141.42 |
| 1990 | 7141.42 | 6606.23 | 7141.42 | 5394.30 | 2063.03 | 5922.52 | 4326.33 | 5103.61 | 6502.02 | 5847.26 | 7141.42 | 7141.42 |
| 1991 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 5484.82 | 6376.04 | 5285.10 | 6427.29 | 5996.72 | 5212.03 | 3576.14 |
| 1992 | 6531.46 | 3791.64 | 7141.42 | 7141.42 | 3653.70 | 3093.49 | 4518.49 | 5114.29 | 5274.33 | 5793.89 | 3397.18 | 2389.26 |
| 1993 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 4374.56 | 5500.64 | 5616.04 | 6907.69 | 6872.12 | 7141.42 | 7141.42 |
| 1994 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 6952.52 | 6480.76 | 7141.42 | 5527.00 | 6589.18 | 7102.85 |
| 1995 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 5361.79 | 4652.12 | 5618.08 | 6053.74 | 6758.23 | 5196.05 | 6781.34 | 7141.42 |
| 1996 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 6674.89 | 5132.53 | 5554.02 | 6555.49 | 6961.07 | 5324.16 | 5500.27 | 4604.76 |
| 1997 | 7141.42 | 7141.42 | 7141.42 | 5835.14 | 5041.52 | 5666.30 | 7101.98 | 7141.42 | 7141.42 | 5420.24 | 7026.88 | 7141.42 |
| 1998 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 5479.22 | 4481.31 | 5884.96 | 5680.09 | 6587.42 | 5708.48 | 5190.67 | 3689.17 |
| 1999 | 6599.28 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 5933.19 | 5703.48 | 6672.92 | 7141.42 | 6274.29 | 4422.03 | 7141.42 |
| 2000 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 6253.46 | 7141.42 | 6480.76 | 7141.42 | 7141.42 | 6631.88 | 7141.42 |
| 2001 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 6765.89 | 7141.42 | 7141.42 | 7141.42 | 5623.08 | 7141.42 | 5588.17 |
| 2002 | 5389.80 | 7141.42 | 7141.42 | 7141.42 | 6034.35 | 4342.53 | 6077.13 | 6811.70 | 7141.42 | 5729.83 | 7141.42 | 7141.42 |
| 2003 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 6151.78 | 4673.48 | 5383.21 | 4697.94 | 6171.07 | 6434.42 | 2980.83 | 7141.42 |
| 2004 | 3592.53 | 7141.42 | 7141.42 | 7141.42 | 4593.15 | 3371.05 | 6311.99 | 4783.34 | 5455.81 | 5238.76 | 7141.42 | 7141.42 |
| 2005 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 5041.52 | 4032.94 | 4742.68 | 4527.13 | 5082.17 | 3872.28 | 2906.10 | 4808.23 |
| 2006 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 6408.00 | 5111.17 | 5874.29 | 6427.38 | 6512.69 | 5484.29 | 5809.86 | 7141.42 |
| 2007 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 5869.14 | 6098.48 | 6662.25 | 7141.42 | 6669.28 | 5276.08 | 4220.44 |
| 2008 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 4860.04 | 3659.29 | 5522.00 | 5701.44 | 5242.30 | 3808.23 | 3824.20 | 4842.14 |
| 2009 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 6546.78 | 4929.69 | 6269.29 | 6000.36 | 6822.29 | 7141.42 | 7141.42 | 7141.42 |
| 2010 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 6587.52 | 6694.18 | 5014.57 | 6439.72 | 7141.42 |
| 2011 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 6669.81 | 6888.47 | 6523.46 | 7141.42 | 7141.42 | 7141.42 | 6142.05 |
| 2012 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 4427.94 | 5618.08 | 4954.15 | 6000.27 | 5324.16 | 4838.38 | 7141.42 |
| 2013 | 4010.76 | 7141.42 | 7141.42 | 7141.42 | 5756.79 | 6381.57 | 6995.23 | 7141.42 | 7141.42 | 7141.42 | 7058.90 | 7141.42 |
| 2014 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7133.94 | 7141.42 | 5991.72 | 5733.47 | 7141.42 | 5217.40 | 3995.01 | 7012.42 |
| 2015 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 4257.13 | 6867.12 | 6181.85 | 6341.88 | 6647.93 | 5030.54 | 5102.12 |
| 2016 | 7141.42 | 6606.23 | 7141.42 | 7141.42 | 7141.42 | 5911.84 | 7141.42 | 6299.28 | 7141.42 | 5505.64 | 3834.88 | 3395.28 |
| 2017 | 3875.12 | 7141.42 | 7141.42 | 7141.42 | 4240.85 | 4331.86 | 6493.47 | 7141.42 | 7141.42 | 5815.24 | 5041.22 | 4367.39 |
| 2018 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 4934.77 | 3531.19 | 4358.36 | 6619.54 | 7141.42 | 7141.42 | 6418.37 | 7141.42 |
| 2019 | 4960.26 | 7141.42 | 7141.42 | 7141.42 | 6642.86 | 4438.61 | 5052.27 | 6203.20 | 6267.15 | 6028.75 | 5948.64 | 7141.42 |
| 2020 | 6927.08 | 7141.42 | 7141.42 | 7141.42 | 5287.06 | 5634.28 | 6269.29 | 5274.42 | 7141.42 | 5153.35 | 6941.47 | 7141.42 |
| 2021 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 6139.14 | 6747.56 | 4342.01 | 6354.31 | 7141.42 |
| 2022 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 |
| 2023 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 5852.87 | 4524.02 | 5201.73 | 4697.94 | 5466.49 | 5110.65 | 5340.13 | 7141.42 |
| 2024 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 3739.10 | 2666.47 | 3942.01 | 5071.58 | 7035.80 | 5591.05 | 2991.50 | 0.00 |
| 2025 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 5746.11 | 5826.44 | 5671.45 | 4687.26 | 5744.05 | 5986.05 | 7101.60 | 6311.60 |
| 2026 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 6306.84 | 6386.72 | 5861.58 | 7141.42 | 7085.63 | 4998.51 | 5418.62 |
| 2027 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 7141.42 | 6157.38 | 5767.53 | 6833.06 | 6918.37 | 7141.42 | 7141.42 | 7141.42 |
| 2028 | 6361.90 | 7141.42 | 7141.42 | 7141.42 | 5479.22 | 4609.42 | 5479.29 | 5648.07 | 7099.85 | 6466.45 | 6162.15 | 3338.76 |
| 2029 | 7141.42 | 6640.14 | 7141.42 | 6976.80 | 2426.00 | 4310.51 | 4625.25 | 5498.61 | 6832.96 | 4993.22 | 5948.64 | 7141.42 |

8. Tabla de energía producida

| AÑO | ENERGÍA (kWh) | | | | | | | | | | | |
|------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Sep | Oct | Nov | Dic |
| 1965 | 3,547,468 | 4,799,033 | 5,313,215 | 5,007,020 | 3,806,491 | 3,318,784 | 4,481,668 | 4,241,874 | 4,773,690 | 4,191,511 | 3,729,599 | 4,704,240 |
| 1966 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 3,075,768 | 4,594,729 | 4,394,299 | 4,583,408 | 5,104,206 | 5,313,215 | 4,905,622 | 5,313,215 |
| 1967 | 4,623,928 | 4,799,033 | 5,313,215 | 5,141,821 | 4,251,278 | 2,849,912 | 5,069,423 | 5,313,215 | 5,141,821 | 5,313,215 | 5,141,821 | 4,039,862 |
| 1968 | 4,825,765 | 3,337,967 | 5,313,215 | 5,141,821 | 2,329,161 | 2,665,438 | 3,155,248 | 3,773,259 | 4,151,090 | 3,254,280 | 3,506,693 | 2,879,303 |
| 1969 | 2,428,958 | 4,799,033 | 5,313,215 | 5,141,821 | 3,870,032 | 2,480,964 | 3,671,519 | 4,440,440 | 4,865,927 | 4,056,486 | 4,398,318 | 5,313,215 |
| 1970 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 4,087,426 | 4,759,660 | 4,797,859 | 5,141,821 | 5,313,215 | 4,213,844 | 5,313,215 |
| 1971 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 4,095,112 | 4,441,955 | 5,171,162 | 5,141,821 | 4,080,314 | 3,053,194 | 5,313,215 |
| 1972 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 4,809,949 | 5,085,308 | 4,646,949 | 5,058,087 | 4,556,872 | 3,060,881 | 5,313,215 |
| 1973 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 4,617,789 | 5,148,849 | 4,424,555 | 5,141,821 | 5,313,215 | 5,141,821 | 5,313,215 |
| 1974 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 3,043,998 | 4,556,297 | 4,870,857 | 5,179,105 | 5,141,821 | 5,247,882 | 3,460,575 | 3,955,763 |
| 1975 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 4,402,569 | 4,592,865 | 4,909,056 | 5,141,821 | 4,175,626 | 4,090,861 | 3,627,779 |
| 1976 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 3,409,359 | 3,979,816 | 4,497,553 | 4,845,514 | 5,141,821 | 3,754,666 | 2,730,365 | 5,313,215 |
| 1977 | 5,120,109 | 4,799,033 | 5,313,215 | 5,141,821 | 5,093,197 | 3,180,428 | 4,148,077 | 4,567,522 | 5,035,028 | 4,842,807 | 5,141,821 | 5,313,215 |
| 1978 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 3,592,040 | 3,288,038 | 3,655,634 | 4,329,243 | 4,489,292 | 4,834,865 | 3,253,041 | 5,141,552 |
| 1979 | 3,917,501 | 4,799,033 | 5,313,215 | 5,141,821 | 3,981,229 | 3,042,072 | 4,219,561 | 4,527,809 | 5,141,821 | 3,627,584 | 2,553,577 | 886,169 |
| 1980 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 3,369,646 | 3,449,453 | 3,743,003 | 3,439,668 | 5,141,821 | 4,088,257 | 5,141,821 | 5,313,215 |
| 1981 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 4,084,483 | 4,210,408 | 5,021,767 | 4,265,702 | 4,835,181 | 5,021,217 | 5,141,821 | 5,313,215 |
| 1982 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 4,584,869 | 3,080,505 | 4,267,217 | 5,313,215 | 4,766,003 | 5,224,054 | 5,141,821 | 4,838,797 |
| 1983 | 5,313,215 | 4,143,142 | 5,313,215 | 5,141,821 | 3,790,605 | 4,410,255 | 3,806,544 | 4,083,422 | 4,881,300 | 3,699,068 | 2,668,875 | 5,313,215 |
| 1984 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 4,879,127 | 4,473,726 | 4,654,891 | 5,141,821 | 5,313,215 | 4,805,698 | 5,313,215 |
| 1985 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 4,825,322 | 5,313,215 | 4,527,809 | 5,141,821 | 3,429,018 | 3,545,125 | 5,313,215 |
| 1986 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 5,141,821 | 5,228,276 | 4,750,203 | 5,141,821 | 4,358,307 | 3,621,989 | 5,313,215 |
| 1987 | 5,313,215 | 4,799,033 | 5,313,215 | 5,015,159 | 2,940,744 | 2,542,455 | 4,068,651 | 4,075,079 | 4,204,895 | 4,000,888 | 3,752,659 | 5,313,215 |
| 1988 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 4,364,137 | 4,330,758 | 3,860,628 | 4,289,445 | 3,953,232 | 2,315,298 | 2,702,696 |
| 1989 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 3,457,139 | 4,616,693 | 3,797,087 | 4,712,199 | 4,930,176 | 4,705,775 | 5,313,215 |
| 1990 | 5,313,215 | 4,439,385 | 5,313,215 | 3,883,899 | 1,534,897 | 4,264,213 | 3,218,789 | 3,797,087 | 4,681,453 | 4,350,364 | 5,141,821 | 5,313,215 |
| 1991 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 3,949,070 | 4,743,775 | 3,932,112 | 4,627,648 | 4,461,561 | 3,752,659 | 2,660,647 |
| 1992 | 4,859,404 | 2,547,983 | 5,313,215 | 5,141,821 | 2,718,350 | 2,227,312 | 3,361,757 | 3,797,514 | 3,805,029 | 3,797,514 | 4,310,651 | 2,445,967 |
| 1993 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 3,149,682 | 4,092,479 | 4,178,333 | 4,973,537 | 5,112,857 | 5,141,821 | 5,313,215 |
| 1994 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 5,141,821 | 5,172,677 | 4,821,687 | 5,141,821 | 4,112,085 | 4,744,207 | 5,284,519 |
| 1995 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 3,989,171 | 3,349,529 | 4,179,848 | 4,503,981 | 4,865,927 | 3,865,863 | 4,882,562 | 5,313,215 |
| 1996 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 4,966,115 | 3,695,418 | 4,132,192 | 4,877,285 | 5,011,969 | 3,961,175 | 3,960,192 | 3,425,943 |
| 1997 | 5,313,215 | 4,799,033 | 5,313,215 | 4,201,303 | 3,750,892 | 4,079,739 | 5,283,874 | 5,313,215 | 5,141,821 | 4,032,659 | 5,059,350 | 5,313,215 |
| 1998 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 4,076,540 | 3,226,547 | 4,378,414 | 4,225,989 | 4,742,944 | 4,247,110 | 3,737,286 | 2,744,745 |
| 1999 | 4,909,863 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 4,271,900 | 4,243,389 | 4,964,654 | 5,141,821 | 4,668,069 | 3,183,864 | 5,313,215 |
| 2000 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 4,502,492 | 5,313,215 | 4,821,687 | 5,141,821 | 5,313,215 | 4,774,953 | 5,313,215 |
| 2001 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 4,871,440 | 5,313,215 | 5,313,215 | 5,141,821 | 4,183,569 | 5,141,821 | 4,157,600 |
| 2002 | 4,010,009 | 4,799,033 | 5,313,215 | 5,141,821 | 4,489,557 | 3,126,623 | 4,521,381 | 5,067,908 | 5,141,821 | 4,262,995 | 5,141,821 | 5,313,215 |
| 2003 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 4,576,926 | 3,364,902 | 4,005,110 | 3,495,267 | 4,443,174 | 4,787,209 | 2,146,197 | 5,313,215 |
| 2004 | 2,672,844 | 4,799,033 | 5,313,215 | 5,141,821 | 3,417,302 | 2,427,159 | 4,696,119 | 3,558,808 | 3,928,184 | 3,897,634 | 5,141,821 | 5,313,215 |
| 2005 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 3,750,892 | 2,903,717 | 3,528,552 | 3,368,184 | 3,659,159 | 2,880,977 | 2,092,392 | 3,577,320 |
| 2006 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 4,767,549 | 3,680,045 | 4,370,471 | 4,781,973 | 4,689,139 | 4,080,314 | 4,183,098 | 5,313,215 |
| 2007 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 4,225,781 | 4,537,267 | 4,956,711 | 5,141,821 | 4,961,947 | 3,798,777 | 3,140,008 |
| 2008 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 3,615,867 | 2,634,692 | 4,108,364 | 4,241,874 | 3,774,455 | 2,833,321 | 2,753,424 | 3,602,550 |
| 2009 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 4,870,804 | 3,549,376 | 4,664,349 | 4,464,268 | 4,912,045 | 5,313,215 | 5,141,821 | 5,313,215 |
| 2010 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 5,141,821 | 5,313,215 | 4,901,113 | 4,819,808 | 3,730,838 | 4,636,597 | 5,313,215 |
| 2011 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 4,802,263 | 5,125,022 | 4,853,457 | 5,141,821 | 5,313,215 | 5,141,821 | 4,569,682 |
| 2012 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 3,188,114 | 4,179,848 | 3,685,890 | 3,685,890 | 4,320,191 | 3,961,175 | 3,483,634 | 5,313,215 |
| 2013 | 2,984,008 | 4,799,033 | 5,313,215 | 5,141,821 | 4,283,049 | 4,594,729 | 5,204,448 | 5,313,215 | 5,141,821 | 5,313,215 | 5,082,409 | 5,313,215 |
| 2014 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,307,649 | 5,141,821 | 4,457,840 | 4,265,702 | 5,141,821 | 3,881,748 | 2,876,407 | 5,217,240 |
| 2015 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 3,065,132 | 5,109,136 | 4,599,293 | 4,566,157 | 4,946,061 | 3,621,989 | 3,795,976 |
| 2016 | 5,313,215 | 4,439,385 | 5,313,215 | 5,141,821 | 4,256,527 | 5,313,215 | 5,313,215 | 4,686,662 | 5,141,821 | 4,096,200 | 2,761,110 | 2,526,089 |
| 2017 | 2,883,090 | 4,799,033 | 5,313,215 | 5,141,821 | 3,155,195 | 3,118,937 | 4,831,144 | 5,313,215 | 5,141,821 | 4,326,536 | 3,629,676 | 3,249,336 |
| 2018 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 3,671,466 | 2,542,455 | 3,242,617 | 4,924,941 | 5,141,821 | 5,313,215 | 4,621,224 | 5,313,215 |
| 2019 | 3,690,435 | 4,799,033 | 5,313,215 | 5,141,821 | 4,942,287 | 3,195,801 | 3,758,888 | 4,615,178 | 4,512,352 | 4,485,389 | 4,283,022 | 5,313,215 |
| 2020 | 5,153,749 | 4,799,033 | 5,313,215 | 5,141,821 | 3,933,573 | 4,056,680 | 4,664,349 | 3,924,169 | 5,141,821 | 3,834,093 | 4,997,859 | 5,313,215 |
| 2021 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 5,141,821 | 5,313,215 | 4,567,522 | 4,858,240 | 3,230,452 | 4,575,106 | 5,313,215 |
| 2022 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 5,141,821 | 5,313,215 | 5,313,215 | 5,141,821 | 5,313,215 | 5,141,821 | 5,313,215 |
| 2023 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 4,354,532 | 3,257,292 | 3,870,085 | 3,495,267 | 3,935,870 | 3,802,322 | 3,844,896 | 5,313,215 |
| 2024 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 2,781,891 | 1,919,855 | 2,932,854 | 3,773,259 | 5,065,774 | 4,159,741 | 2,153,883 | 0 |
| 2025 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 4,275,106 | 4,195,035 | 4,219,561 | 3,487,324 | 4,135,717 | 4,453,618 | 5,113,155 | 4,695,830 |
| 2026 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 4,540,924 | 4,751,718 | 4,361,014 | 5,141,821 | 5,271,709 | 3,598,930 | 4,031,452 |
| 2027 | 5,313,215 | 4,799,033 | 5,313,215 | 5,141,821 | 5,313,215 | 4,433,314 | 4,291,045 | 5,083,793 | 4,981,223 | 5,313,215 | 5,141,821 | 5,313,215 |
| 2028 | 4,733,256 | 4,799,033 | 5,313,215 | 5,141,821 | 4,076,540 | 3,318,784 | 4,076,594 | 4,202,161 | 5,111,892 | 4,811,037 | 4,436,750 | 2,484,040 |
| 2029 | 5,313,215 | 4,462,173 | 5,313,215 | 5,023,297 | 1,804,947 | 3,103,564 | 3,441,183 | 4,090,964 | 4,919,732 | 3,714,953 | 4,283,022 | 5,313,215 |

Factor de planta = 0.89

Cálculo del factor de planta $Q=1.60\text{m}^3/\text{s}$

1. Parámetros de entrada

| Parámetros de entrada | |
|------------------------------------|-------|
| Caudal (m ³ /s) | 1.6 |
| Longitud de Canal (m) | 7400 |
| Longitud de la tubería Forzada (m) | 735 |
| Pendiente del canal (m) | 0.001 |
| Diámetro de la tubería forzada (m) | 0.61 |

2. Cálculo de pérdidas de energía en la tubería forzada

| En la tubería forzada | |
|-------------------------------------|------------|
| Área del conducto (m ²) | 0.29 |
| Velocidad (m/s) | 5.47 |
| Re | 3339644.71 |
| f | 0.01 |
| Pérdida en el túnel (m) | 22.52 |

3. Cálculo de pérdidas de energía en el canal

| | |
|---------------------|---------------|
| En el canal | EC. Bernoulli |
| Pérdida en el canal | 7.400 |

4. Pérdida total, altura neta y potencia generada

| | |
|------------------------|--------|
| Pérdida total (m) | 29.92 |
| Altura neta (m) | 500.08 |
| Potencia generada (kW) | 6671.9 |

5. Tabla de caudales captados considerando el caudal ecológico

| AÑO | CAUDALES CONSIDERANDO EL CAUDAL ECOLÓGICO (m ³ /s) | | | | | | | | | | |
|------|---|------|------|------|------|------|------|------|------|------|------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Oct | Nov | Dic |
| 1965 | 1.14 | 4.10 | 3.81 | 1.67 | 1.23 | 1.10 | 1.44 | 1.37 | 1.35 | 1.24 | 1.51 |
| 1966 | 4.01 | 3.19 | 3.71 | 2.43 | 0.99 | 1.53 | 1.41 | 1.48 | 1.81 | 1.63 | 1.76 |
| 1967 | 1.49 | 7.76 | 7.21 | 2.42 | 1.37 | 0.95 | 1.63 | 1.92 | 2.31 | 1.78 | 1.30 |
| 1968 | 1.55 | 1.19 | 2.46 | 1.80 | 0.75 | 0.89 | 1.02 | 1.21 | 1.05 | 1.17 | 0.93 |
| 1969 | 0.78 | 2.36 | 3.14 | 3.13 | 1.25 | 0.83 | 1.18 | 1.43 | 1.31 | 1.46 | 4.15 |
| 1970 | 6.02 | 3.09 | 3.20 | 2.97 | 2.00 | 1.36 | 1.53 | 1.54 | 1.99 | 1.40 | 2.72 |
| 1971 | 3.67 | 4.90 | 7.02 | 3.94 | 1.79 | 1.36 | 1.43 | 1.66 | 1.31 | 1.02 | 1.83 |
| 1972 | 4.83 | 4.12 | 8.48 | 5.07 | 1.90 | 1.60 | 1.64 | 1.50 | 1.47 | 1.02 | 2.41 |
| 1973 | 5.27 | 7.28 | 7.00 | 5.56 | 2.04 | 1.54 | 1.66 | 1.42 | 1.83 | 1.90 | 3.40 |
| 1974 | 3.95 | 4.49 | 5.59 | 2.69 | 0.98 | 1.52 | 1.57 | 1.67 | 1.69 | 1.15 | 1.27 |
| 1975 | 2.27 | 2.46 | 6.61 | 2.86 | 1.74 | 1.46 | 1.48 | 1.58 | 1.34 | 1.36 | 1.17 |
| 1976 | 2.74 | 4.80 | 4.44 | 2.56 | 1.10 | 1.32 | 1.45 | 1.56 | 1.21 | 0.91 | 1.77 |
| 1977 | 1.65 | 6.12 | 3.89 | 2.34 | 1.64 | 1.06 | 1.34 | 1.47 | 1.56 | 2.19 | 1.91 |
| 1978 | 2.11 | 4.77 | 2.88 | 1.82 | 1.16 | 1.09 | 1.18 | 1.39 | 1.56 | 1.08 | 1.65 |
| 1979 | 1.26 | 4.64 | 6.15 | 3.04 | 1.28 | 1.01 | 1.36 | 1.46 | 1.17 | 0.85 | 0.29 |
| 1980 | 2.27 | 2.00 | 3.73 | 2.57 | 1.08 | 1.15 | 1.20 | 1.11 | 1.32 | 1.96 | 2.01 |
| 1981 | 2.70 | 7.45 | 6.07 | 2.68 | 1.31 | 1.40 | 1.62 | 1.37 | 1.79 | 1.90 | 2.52 |
| 1982 | 2.29 | 7.79 | 3.39 | 1.80 | 1.48 | 1.02 | 1.37 | 2.09 | 1.68 | 2.09 | 1.56 |
| 1983 | 2.39 | 1.48 | 3.77 | 3.75 | 1.22 | 1.47 | 1.23 | 1.31 | 1.19 | 0.89 | 1.79 |
| 1984 | 2.52 | 8.75 | 6.87 | 4.19 | 2.02 | 1.62 | 1.44 | 1.50 | 1.91 | 1.60 | 3.45 |
| 1985 | 2.06 | 3.63 | 5.04 | 3.95 | 1.78 | 1.60 | 1.73 | 1.46 | 1.10 | 1.18 | 2.24 |
| 1986 | 4.60 | 5.11 | 6.85 | 5.15 | 2.35 | 1.83 | 1.68 | 1.53 | 1.40 | 1.20 | 1.71 |
| 1987 | 4.75 | 4.86 | 3.17 | 1.67 | 0.95 | 0.85 | 1.31 | 1.31 | 1.29 | 1.25 | 2.30 |
| 1988 | 3.87 | 5.54 | 3.43 | 4.01 | 1.73 | 1.45 | 1.39 | 1.24 | 1.27 | 0.77 | 0.87 |
| 1989 | 4.13 | 6.43 | 6.05 | 4.11 | 1.80 | 1.15 | 1.49 | 1.22 | 1.59 | 1.56 | 1.88 |
| 1990 | 2.64 | 1.58 | 1.88 | 1.29 | 0.49 | 1.42 | 1.04 | 1.22 | 1.40 | 2.86 | 2.34 |
| 1991 | 2.09 | 2.64 | 5.23 | 2.42 | 1.80 | 1.31 | 1.53 | 1.27 | 1.44 | 1.25 | 0.86 |
| 1992 | 1.56 | 0.91 | 2.48 | 1.77 | 0.87 | 0.74 | 1.08 | 1.22 | 1.39 | 0.81 | 0.57 |
| 1993 | 2.13 | 4.18 | 5.11 | 3.48 | 1.85 | 1.05 | 1.32 | 1.34 | 1.65 | 2.95 | 4.17 |
| 1994 | 4.88 | 5.44 | 5.37 | 5.33 | 2.63 | 2.00 | 1.66 | 1.55 | 1.32 | 1.58 | 1.70 |
| 1995 | 2.64 | 2.30 | 3.77 | 3.54 | 1.28 | 1.11 | 1.35 | 1.45 | 1.24 | 1.62 | 2.10 |
| 1996 | 3.72 | 5.75 | 5.17 | 3.71 | 1.60 | 1.23 | 1.33 | 1.57 | 1.27 | 1.32 | 1.10 |
| 1997 | 2.25 | 4.51 | 2.97 | 1.40 | 1.21 | 1.36 | 1.70 | 1.73 | 1.30 | 1.68 | 2.71 |
| 1998 | 4.95 | 5.20 | 4.88 | 2.78 | 1.31 | 1.07 | 1.41 | 1.36 | 1.37 | 1.24 | 0.88 |
| 1999 | 1.58 | 4.98 | 4.84 | 3.78 | 2.29 | 1.42 | 1.37 | 1.60 | 1.50 | 1.06 | 2.72 |
| 2000 | 4.43 | 6.03 | 5.55 | 2.80 | 2.29 | 1.50 | 1.79 | 1.55 | 2.12 | 1.59 | 2.68 |
| 2001 | 6.22 | 5.23 | 5.84 | 3.83 | 2.36 | 1.62 | 1.73 | 1.79 | 1.35 | 1.77 | 1.34 |
| 2002 | 1.29 | 3.39 | 5.31 | 3.38 | 1.44 | 1.04 | 1.46 | 1.63 | 1.37 | 1.93 | 2.44 |
| 2003 | 4.06 | 4.55 | 5.38 | 3.57 | 1.47 | 1.12 | 1.29 | 1.12 | 1.54 | 0.71 | 1.77 |
| 2004 | 0.86 | 3.58 | 3.23 | 2.71 | 1.10 | 0.81 | 1.51 | 1.15 | 1.25 | 2.13 | 3.12 |
| 2005 | 3.88 | 3.74 | 4.92 | 3.90 | 1.21 | 0.97 | 1.14 | 1.08 | 0.93 | 0.70 | 1.15 |
| 2006 | 2.83 | 4.19 | 5.68 | 4.63 | 1.53 | 1.22 | 1.41 | 1.54 | 1.31 | 1.39 | 2.37 |
| 2007 | 4.56 | 4.81 | 5.82 | 4.31 | 1.84 | 1.41 | 1.46 | 1.60 | 1.60 | 1.26 | 1.01 |
| 2008 | 4.33 | 5.60 | 4.58 | 2.74 | 1.16 | 0.88 | 1.32 | 1.37 | 0.91 | 0.92 | 1.16 |
| 2009 | 3.49 | 6.71 | 5.79 | 3.45 | 1.57 | 1.18 | 1.50 | 1.44 | 1.78 | 3.07 | 4.49 |
| 2010 | 7.15 | 4.29 | 4.65 | 4.01 | 1.71 | 1.91 | 1.84 | 1.58 | 1.20 | 1.54 | 2.75 |
| 2011 | 3.64 | 6.61 | 8.03 | 6.12 | 2.42 | 1.60 | 1.65 | 1.56 | 2.01 | 1.78 | 1.47 |
| 2012 | 3.37 | 6.49 | 5.47 | 4.49 | 1.73 | 1.06 | 1.35 | 1.19 | 1.27 | 1.16 | 2.51 |
| 2013 | 0.96 | 6.77 | 6.79 | 2.88 | 1.38 | 1.53 | 1.67 | 1.78 | 1.93 | 1.69 | 2.83 |
| 2014 | 3.51 | 3.79 | 5.41 | 3.18 | 1.71 | 1.75 | 1.43 | 1.37 | 1.25 | 0.96 | 1.68 |
| 2015 | 3.94 | 4.51 | 5.27 | 3.47 | 1.91 | 1.02 | 1.64 | 1.48 | 1.59 | 1.20 | 1.22 |
| 2016 | 2.38 | 1.58 | 3.76 | 2.66 | 1.73 | 1.42 | 1.87 | 1.51 | 1.32 | 0.92 | 0.81 |
| 2017 | 0.93 | 2.46 | 4.14 | 1.91 | 1.02 | 1.04 | 1.55 | 1.73 | 1.39 | 1.21 | 1.05 |
| 2018 | 3.13 | 4.54 | 3.12 | 2.52 | 1.18 | 0.85 | 1.04 | 1.59 | 1.86 | 1.54 | 3.61 |
| 2019 | 1.19 | 4.59 | 3.29 | 2.26 | 1.59 | 1.06 | 1.21 | 1.49 | 1.44 | 1.42 | 2.14 |
| 2020 | 1.66 | 4.93 | 3.01 | 2.91 | 1.27 | 1.35 | 1.50 | 1.26 | 1.23 | 1.66 | 3.13 |
| 2021 | 2.84 | 3.70 | 4.55 | 4.62 | 2.30 | 1.76 | 1.85 | 1.47 | 1.04 | 1.52 | 2.78 |
| 2022 | 2.37 | 4.13 | 2.91 | 3.57 | 2.01 | 2.08 | 1.86 | 2.02 | 2.23 | 3.39 | 4.22 |
| 2023 | 6.12 | 2.07 | 4.39 | 2.41 | 1.40 | 1.08 | 1.25 | 1.12 | 1.22 | 1.28 | 2.14 |
| 2024 | 2.99 | 4.99 | 5.78 | 2.39 | 0.90 | 0.64 | 0.94 | 1.21 | 1.34 | 0.72 | 0.24 |
| 2025 | 2.35 | 5.41 | 4.02 | 1.85 | 1.38 | 1.40 | 1.36 | 1.12 | 1.43 | 1.70 | 1.51 |
| 2026 | 4.17 | 5.80 | 5.50 | 3.06 | 1.88 | 1.51 | 1.53 | 1.40 | 1.70 | 1.20 | 1.30 |
| 2027 | 2.60 | 5.61 | 9.23 | 5.03 | 2.35 | 1.47 | 1.38 | 1.64 | 2.02 | 2.33 | 1.86 |
| 2028 | 1.52 | 2.90 | 3.91 | 2.23 | 1.31 | 1.10 | 1.31 | 1.35 | 1.55 | 1.48 | 0.80 |
| 2029 | 1.95 | 1.59 | 2.21 | 1.67 | 0.58 | 1.03 | 1.11 | 1.32 | 1.20 | 1.42 | 3.31 |

6. Tabla de caudales turbinables

| AÑO | CAUDALES TURBINABLES (m³/s) | | | | | | | | | | | |
|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Sep | Oct | Nov | Dic |
| 1965 | 1.14 | 1.60 | 1.60 | 1.60 | 1.23 | 1.10 | 1.44 | 1.37 | 1.59 | 1.35 | 1.24 | 1.51 |
| 1966 | 1.60 | 1.60 | 1.60 | 1.60 | 0.99 | 1.53 | 1.41 | 1.48 | 1.60 | 1.60 | 1.60 | 1.60 |
| 1967 | 1.49 | 1.60 | 1.60 | 1.60 | 1.37 | 0.95 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.30 |
| 1968 | 1.55 | 1.19 | 1.60 | 1.60 | 0.75 | 0.89 | 1.02 | 1.21 | 1.38 | 1.05 | 1.17 | 0.93 |
| 1969 | 0.78 | 1.60 | 1.60 | 1.60 | 1.25 | 0.83 | 1.18 | 1.43 | 1.60 | 1.31 | 1.46 | 1.60 |
| 1970 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.36 | 1.53 | 1.54 | 1.60 | 1.60 | 1.40 | 1.60 |
| 1971 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.36 | 1.43 | 1.60 | 1.60 | 1.31 | 1.02 | 1.60 |
| 1972 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.50 | 1.60 | 1.47 | 1.02 | 1.60 |
| 1973 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.54 | 1.60 | 1.42 | 1.60 | 1.60 | 1.60 | 1.60 |
| 1974 | 1.60 | 1.60 | 1.60 | 1.60 | 0.98 | 1.52 | 1.57 | 1.60 | 1.60 | 1.60 | 1.15 | 1.27 |
| 1975 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.46 | 1.48 | 1.58 | 1.60 | 1.34 | 1.36 | 1.17 |
| 1976 | 1.60 | 1.60 | 1.60 | 1.60 | 1.10 | 1.32 | 1.45 | 1.56 | 1.60 | 1.21 | 0.91 | 1.60 |
| 1977 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.06 | 1.34 | 1.47 | 1.60 | 1.56 | 1.60 | 1.60 |
| 1978 | 1.60 | 1.60 | 1.60 | 1.60 | 1.16 | 1.09 | 1.18 | 1.39 | 1.49 | 1.56 | 1.08 | 1.60 |
| 1979 | 1.26 | 1.60 | 1.60 | 1.60 | 1.28 | 1.01 | 1.36 | 1.46 | 1.60 | 1.17 | 0.85 | 0.29 |
| 1980 | 1.60 | 1.60 | 1.60 | 1.60 | 1.08 | 1.15 | 1.20 | 1.11 | 1.60 | 1.32 | 1.60 | 1.60 |
| 1981 | 1.60 | 1.60 | 1.60 | 1.60 | 1.31 | 1.40 | 1.60 | 1.37 | 1.60 | 1.60 | 1.60 | 1.60 |
| 1982 | 1.60 | 1.60 | 1.60 | 1.60 | 1.48 | 1.02 | 1.37 | 1.60 | 1.59 | 1.60 | 1.60 | 1.56 |
| 1983 | 1.60 | 1.48 | 1.60 | 1.60 | 1.22 | 1.47 | 1.23 | 1.31 | 1.60 | 1.19 | 0.89 | 1.60 |
| 1984 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.44 | 1.50 | 1.60 | 1.60 | 1.60 | 1.60 |
| 1985 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.46 | 1.60 | 1.10 | 1.18 | 1.60 |
| 1986 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.53 | 1.60 | 1.40 | 1.20 | 1.60 |
| 1987 | 1.60 | 1.60 | 1.60 | 1.60 | 0.95 | 0.85 | 1.31 | 1.31 | 1.40 | 1.29 | 1.25 | 1.60 |
| 1988 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.45 | 1.39 | 1.24 | 1.43 | 1.27 | 0.77 | 0.87 |
| 1989 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.15 | 1.49 | 1.22 | 1.57 | 1.59 | 1.56 | 1.60 |
| 1990 | 1.60 | 1.58 | 1.60 | 1.29 | 0.49 | 1.42 | 1.04 | 1.22 | 1.56 | 1.40 | 1.60 | 1.60 |
| 1991 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.31 | 1.53 | 1.27 | 1.54 | 1.44 | 1.25 | 0.86 |
| 1992 | 1.56 | 0.91 | 1.60 | 1.60 | 0.87 | 0.74 | 1.08 | 1.22 | 1.26 | 1.39 | 0.81 | 0.57 |
| 1993 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.05 | 1.32 | 1.34 | 1.60 | 1.60 | 1.60 | 1.60 |
| 1994 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.55 | 1.60 | 1.32 | 1.58 | 1.60 |
| 1995 | 1.60 | 1.60 | 1.60 | 1.60 | 1.28 | 1.11 | 1.35 | 1.45 | 1.60 | 1.24 | 1.60 | 1.60 |
| 1996 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.23 | 1.33 | 1.57 | 1.60 | 1.27 | 1.32 | 1.10 |
| 1997 | 1.60 | 1.60 | 1.60 | 1.40 | 1.21 | 1.36 | 1.60 | 1.60 | 1.60 | 1.30 | 1.60 | 1.60 |
| 1998 | 1.60 | 1.60 | 1.60 | 1.60 | 1.31 | 1.07 | 1.41 | 1.36 | 1.58 | 1.37 | 1.24 | 0.88 |
| 1999 | 1.58 | 1.60 | 1.60 | 1.60 | 1.60 | 1.42 | 1.37 | 1.60 | 1.60 | 1.50 | 1.06 | 1.60 |
| 2000 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.50 | 1.60 | 1.55 | 1.60 | 1.60 | 1.59 | 1.60 |
| 2001 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.35 | 1.60 | 1.34 |
| 2002 | 1.29 | 1.60 | 1.60 | 1.60 | 1.44 | 1.04 | 1.46 | 1.60 | 1.60 | 1.37 | 1.60 | 1.60 |
| 2003 | 1.60 | 1.60 | 1.60 | 1.60 | 1.47 | 1.12 | 1.29 | 1.12 | 1.48 | 1.54 | 0.71 | 1.60 |
| 2004 | 0.86 | 1.60 | 1.60 | 1.60 | 1.10 | 0.81 | 1.51 | 1.15 | 1.31 | 1.25 | 1.60 | 1.60 |
| 2005 | 1.60 | 1.60 | 1.60 | 1.60 | 1.21 | 0.97 | 1.14 | 1.08 | 1.22 | 0.93 | 0.70 | 1.15 |
| 2006 | 1.60 | 1.60 | 1.60 | 1.60 | 1.53 | 1.22 | 1.41 | 1.54 | 1.56 | 1.31 | 1.39 | 1.60 |
| 2007 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.41 | 1.46 | 1.60 | 1.60 | 1.60 | 1.26 | 1.01 |
| 2008 | 1.60 | 1.60 | 1.60 | 1.60 | 1.16 | 0.88 | 1.32 | 1.37 | 1.26 | 0.91 | 0.92 | 1.16 |
| 2009 | 1.60 | 1.60 | 1.60 | 1.60 | 1.57 | 1.18 | 1.50 | 1.44 | 1.60 | 1.60 | 1.60 | 1.60 |
| 2010 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.58 | 1.60 | 1.20 | 1.54 | 1.60 |
| 2011 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.56 | 1.60 | 1.60 | 1.60 | 1.47 |
| 2012 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.06 | 1.35 | 1.19 | 1.44 | 1.27 | 1.16 | 1.60 |
| 2013 | 0.96 | 1.60 | 1.60 | 1.60 | 1.38 | 1.53 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 |
| 2014 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.43 | 1.37 | 1.60 | 1.25 | 0.96 | 1.60 |
| 2015 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.02 | 1.60 | 1.48 | 1.52 | 1.59 | 1.20 | 1.22 |
| 2016 | 1.60 | 1.58 | 1.60 | 1.60 | 1.60 | 1.42 | 1.60 | 1.51 | 1.60 | 1.32 | 0.92 | 0.81 |
| 2017 | 0.93 | 1.60 | 1.60 | 1.60 | 1.02 | 1.04 | 1.55 | 1.60 | 1.60 | 1.39 | 1.21 | 1.05 |
| 2018 | 1.60 | 1.60 | 1.60 | 1.60 | 1.18 | 0.85 | 1.04 | 1.59 | 1.60 | 1.60 | 1.54 | 1.60 |
| 2019 | 1.19 | 1.60 | 1.60 | 1.60 | 1.59 | 1.06 | 1.21 | 1.49 | 1.50 | 1.44 | 1.42 | 1.60 |
| 2020 | 1.60 | 1.60 | 1.60 | 1.60 | 1.27 | 1.35 | 1.50 | 1.26 | 1.60 | 1.23 | 1.60 | 1.60 |
| 2021 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.47 | 1.60 | 1.04 | 1.52 | 1.60 |
| 2022 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 |
| 2023 | 1.60 | 1.60 | 1.60 | 1.60 | 1.40 | 1.08 | 1.25 | 1.12 | 1.31 | 1.22 | 1.28 | 1.60 |
| 2024 | 1.60 | 1.60 | 1.60 | 1.60 | 0.90 | 0.64 | 0.94 | 1.21 | 1.60 | 1.34 | 0.72 | 0.24 |
| 2025 | 1.60 | 1.60 | 1.60 | 1.60 | 1.38 | 1.40 | 1.36 | 1.12 | 1.38 | 1.43 | 1.60 | 1.51 |
| 2026 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.51 | 1.53 | 1.40 | 1.60 | 1.60 | 1.20 | 1.30 |
| 2027 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.47 | 1.38 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 |
| 2028 | 1.52 | 1.60 | 1.60 | 1.60 | 1.31 | 1.10 | 1.31 | 1.35 | 1.60 | 1.55 | 1.48 | 0.80 |
| 2029 | 1.60 | 1.59 | 1.60 | 1.60 | 0.58 | 1.03 | 1.11 | 1.32 | 1.60 | 1.20 | 1.42 | 1.60 |

Los caudales turbinables se obtuvieron bajo la condición: si $Q_{captado} > Q_{diseño}$ entonces el caudal turbinable será el $Q_{diseño}$. En caso contrario será el $Q_{captado}$.

7. Tabla de potencias efectivas

| AÑO | POTENCIAS EFECTIVAS (kW) | | | | | | | | | | | |
|------|--------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Sep | Oct | Nov | Dic |
| 1965 | 4760.85 | 6671.86 | 6671.86 | 6671.86 | 5108.47 | 4602.41 | 6014.58 | 5692.77 | 6620.04 | 5625.18 | 5172.12 | 6313.28 |
| 1966 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 4127.81 | 6371.86 | 5897.33 | 6151.12 | 6671.86 | 6671.86 | 6671.86 | 6671.86 |
| 1967 | 6205.50 | 6671.86 | 6671.86 | 6671.86 | 5705.39 | 3952.19 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 5421.66 |
| 1968 | 6476.37 | 4959.65 | 6671.86 | 6671.86 | 3125.83 | 3696.36 | 4234.47 | 5063.87 | 5756.63 | 4367.38 | 4863.00 | 3864.14 |
| 1969 | 3259.76 | 6671.86 | 6671.86 | 6671.86 | 5193.74 | 3440.54 | 4927.33 | 5959.25 | 6671.86 | 5443.97 | 6099.48 | 6671.86 |
| 1970 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 5668.34 | 6387.66 | 6438.92 | 6671.86 | 6671.86 | 5843.66 | 6671.86 |
| 1971 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 5679.00 | 5961.29 | 6671.86 | 6671.86 | 5475.95 | 4234.10 | 6671.86 |
| 1972 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6670.32 | 6671.86 | 6236.40 | 6671.86 | 6115.51 | 4244.76 | 6671.86 |
| 1973 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6403.84 | 6671.86 | 5937.93 | 6671.86 | 6671.86 | 6671.86 | 6671.86 |
| 1974 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 4085.17 | 6318.56 | 6536.89 | 6671.86 | 6671.86 | 6671.86 | 4799.04 | 5308.80 |
| 1975 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6105.38 | 6163.81 | 6588.15 | 6671.86 | 5603.86 | 5673.11 | 4868.63 |
| 1976 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 4575.50 | 5519.11 | 6035.90 | 6502.88 | 6671.86 | 5038.92 | 3786.40 | 6671.86 |
| 1977 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 4410.54 | 5566.89 | 6129.80 | 6671.86 | 6499.25 | 6671.86 | 6671.86 |
| 1978 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 4820.66 | 4559.77 | 4906.01 | 5810.02 | 6225.64 | 6488.59 | 4511.24 | 6671.86 |
| 1979 | 5257.45 | 6671.86 | 6671.86 | 6671.86 | 5342.97 | 4218.67 | 5662.82 | 6076.51 | 6671.86 | 4868.37 | 3541.24 | 1189.27 |
| 1980 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 4522.20 | 4783.62 | 5023.26 | 4616.18 | 6671.86 | 5486.61 | 6671.86 | 6671.86 |
| 1981 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 5481.54 | 5838.89 | 6671.86 | 5724.75 | 6671.86 | 6671.86 | 6671.86 | 6671.86 |
| 1982 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6153.08 | 4271.97 | 5726.78 | 6671.86 | 6609.38 | 6671.86 | 6671.86 | 6493.86 |
| 1983 | 6671.86 | 6156.01 | 6671.86 | 6671.86 | 5087.15 | 6116.03 | 5108.54 | 5479.58 | 6671.86 | 4964.30 | 3701.13 | 6671.86 |
| 1984 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6003.92 | 6247.06 | 6671.86 | 6671.86 | 6664.43 | 6671.86 |
| 1985 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6076.51 | 6671.86 | 4601.88 | 4916.29 | 6671.86 |
| 1986 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6374.97 | 6671.86 | 5849.03 | 5022.89 | 6671.86 |
| 1987 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 3946.60 | 3525.82 | 5460.30 | 5468.92 | 5831.25 | 5369.36 | 5204.10 | 6671.86 |
| 1988 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6052.08 | 5812.06 | 5181.12 | 5948.50 | 5305.40 | 3210.80 | 3627.13 |
| 1989 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 4794.28 | 6195.79 | 5095.85 | 6534.76 | 6616.50 | 6525.85 | 6671.86 |
| 1990 | 6671.86 | 6596.18 | 6671.86 | 5386.10 | 2059.90 | 5913.51 | 4319.75 | 5095.85 | 6492.13 | 5838.37 | 6671.86 | 6671.86 |
| 1991 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 5476.47 | 6366.34 | 5277.05 | 6417.51 | 5987.60 | 5204.10 | 3570.70 |
| 1992 | 6521.52 | 3785.87 | 6671.86 | 6671.86 | 3648.14 | 3088.78 | 4511.62 | 5106.51 | 5266.30 | 5785.07 | 3392.01 | 2385.63 |
| 1993 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 4367.90 | 5492.27 | 5607.49 | 6671.86 | 6671.86 | 6671.86 | 6671.86 |
| 1994 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6470.90 | 6671.86 | 5518.59 | 6579.15 | 6671.86 |
| 1995 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 5353.63 | 4645.05 | 5609.53 | 6044.53 | 6671.86 | 5188.15 | 6671.86 | 6671.86 |
| 1996 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6664.73 | 5124.72 | 5545.57 | 6545.52 | 6671.86 | 5316.06 | 5941.90 | 4597.76 |
| 1997 | 6671.86 | 6671.86 | 6671.86 | 5826.26 | 5033.85 | 5657.68 | 6671.86 | 6671.86 | 6671.86 | 5411.99 | 6671.86 | 6671.86 |
| 1998 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 5470.88 | 4474.50 | 5876.01 | 5671.45 | 6577.40 | 5699.80 | 5182.78 | 3683.56 |
| 1999 | 6589.24 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 5924.17 | 5694.80 | 6662.77 | 6671.86 | 6264.74 | 4415.30 | 6671.86 |
| 2000 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6243.95 | 6671.86 | 6470.90 | 6671.86 | 6671.86 | 6621.79 | 6671.86 |
| 2001 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 5614.52 | 6671.86 | 5579.67 |
| 2002 | 5381.60 | 6671.86 | 6671.86 | 6671.86 | 6025.17 | 4335.92 | 6067.88 | 6671.86 | 6671.86 | 5721.11 | 6671.86 | 6671.86 |
| 2003 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6142.42 | 4666.36 | 5375.02 | 4690.79 | 6161.69 | 6424.63 | 2976.29 | 6671.86 |
| 2004 | 3587.07 | 6671.86 | 6671.86 | 6671.86 | 4586.16 | 3365.92 | 6302.38 | 4776.07 | 5447.51 | 5230.78 | 6671.86 | 6671.86 |
| 2005 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 5033.85 | 4026.80 | 4735.46 | 4520.24 | 5074.43 | 3866.39 | 2901.68 | 4800.91 |
| 2006 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6398.25 | 5103.40 | 5865.35 | 6417.60 | 6502.78 | 5475.95 | 5801.02 | 6671.86 |
| 2007 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 5860.21 | 6089.20 | 6652.11 | 6671.86 | 6659.14 | 5268.05 | 4214.02 |
| 2008 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 4852.64 | 3653.73 | 5513.59 | 5692.77 | 5234.32 | 3802.43 | 3818.38 | 4834.77 |
| 2009 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6536.82 | 4922.19 | 6259.75 | 5991.23 | 6671.86 | 6671.86 | 6671.86 | 6671.86 |
| 2010 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6577.49 | 6671.86 | 5006.94 | 6429.92 | 6671.86 |
| 2011 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6659.66 | 6671.86 | 6513.54 | 6671.86 | 6671.86 | 6671.86 | 6132.70 |
| 2012 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 4421.20 | 5609.53 | 4946.62 | 5991.14 | 5316.06 | 4831.02 | 6671.86 |
| 2013 | 4004.66 | 6671.86 | 6671.86 | 6671.86 | 5748.03 | 6371.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 |
| 2014 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 5982.60 | 5724.75 | 6671.86 | 5209.47 | 3988.93 | 6671.86 |
| 2015 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 4250.65 | 6671.86 | 6172.44 | 6332.24 | 6637.82 | 5022.89 | 5094.36 |
| 2016 | 6671.86 | 6596.18 | 6671.86 | 6671.86 | 6671.86 | 5902.85 | 6671.86 | 6289.69 | 6671.86 | 5497.27 | 3829.04 | 3390.12 |
| 2017 | 3869.22 | 6671.86 | 6671.86 | 6671.86 | 4234.40 | 4325.27 | 6483.59 | 6671.86 | 6671.86 | 5806.39 | 5033.55 | 4360.74 |
| 2018 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 4927.26 | 3525.82 | 4351.73 | 6609.47 | 6671.86 | 6671.86 | 6408.60 | 6671.86 |
| 2019 | 4952.72 | 6671.86 | 6671.86 | 6671.86 | 6632.75 | 4431.86 | 5044.58 | 6193.76 | 6257.62 | 6019.58 | 5939.59 | 6671.86 |
| 2020 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 5279.02 | 5625.71 | 6259.75 | 5266.40 | 6671.86 | 5145.51 | 6671.86 | 6671.86 |
| 2021 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6129.80 | 6671.86 | 4335.40 | 6344.65 | 6671.86 |
| 2022 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 |
| 2023 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 5843.96 | 4517.13 | 5193.81 | 4690.79 | 5458.17 | 5102.87 | 5332.01 | 6671.86 |
| 2024 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 3733.41 | 2662.41 | 3936.01 | 5063.87 | 6671.86 | 5582.54 | 2986.95 | 1019.98 |
| 2025 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 5737.37 | 5817.57 | 5662.82 | 4680.13 | 5735.31 | 5976.94 | 6671.86 | 6302.00 |
| 2026 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6297.24 | 6377.00 | 5852.66 | 6671.86 | 6671.86 | 4990.91 | 5410.37 |
| 2027 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6148.01 | 5758.76 | 6671.86 | 6671.86 | 6671.86 | 6671.86 | 6671.86 |
| 2028 | 6352.22 | 6671.86 | 6671.86 | 6671.86 | 5470.88 | 4602.41 | 5470.96 | 5639.47 | 6671.86 | 6456.61 | 6152.78 | 3333.68 |
| 2029 | 6671.86 | 6630.04 | 6671.86 | 6671.86 | 2422.31 | 4303.95 | 4618.21 | 5490.24 | 6671.86 | 4985.62 | 5939.59 | 6671.86 |

8. Tabla de energía producida

| AÑO | ENERGÍA (kWh) | | | | | | | | | | | |
|------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Sep | Oct | Nov | Dic |
| 1965 | 3,542,070 | 4,483,491 | 4,963,865 | 4,803,741 | 3,800,699 | 3,313,734 | 4,474,849 | 4,235,420 | 4,766,427 | 4,185,134 | 3,723,925 | 4,697,082 |
| 1966 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 3,071,089 | 4,587,739 | 4,387,613 | 4,576,434 | 4,803,741 | 4,963,865 | 4,803,741 | 4,963,865 |
| 1967 | 4,616,893 | 4,483,491 | 4,963,865 | 4,803,741 | 4,244,810 | 2,845,576 | 4,963,865 | 4,963,865 | 4,803,741 | 4,963,865 | 4,803,741 | 4,033,715 |
| 1968 | 4,818,422 | 3,332,888 | 4,963,865 | 4,803,741 | 2,325,617 | 2,661,382 | 3,150,448 | 3,767,518 | 4,144,774 | 3,249,329 | 3,501,358 | 2,874,922 |
| 1969 | 2,425,262 | 4,483,491 | 4,963,865 | 4,803,741 | 3,864,144 | 2,477,189 | 3,665,933 | 4,433,684 | 4,803,741 | 4,050,315 | 4,391,626 | 4,963,865 |
| 1970 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 4,081,207 | 4,752,419 | 4,790,559 | 4,803,741 | 4,963,865 | 4,207,433 | 4,963,865 |
| 1971 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 4,088,881 | 4,435,197 | 4,963,865 | 4,803,741 | 4,074,106 | 3,048,549 | 4,963,865 |
| 1972 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 4,802,631 | 4,963,865 | 4,639,878 | 4,803,741 | 4,549,939 | 3,056,224 | 4,963,865 |
| 1973 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 4,610,763 | 4,963,865 | 4,417,823 | 4,803,741 | 4,963,865 | 4,803,741 | 4,963,865 |
| 1974 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 4,549,365 | 4,863,446 | 4,963,865 | 4,803,741 | 4,963,865 | 3,455,309 | 3,949,745 |
| 1975 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 4,395,870 | 4,585,877 | 4,901,587 | 4,803,741 | 4,169,273 | 4,084,637 | 3,622,260 |
| 1976 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 3,404,172 | 3,973,761 | 4,490,710 | 4,838,142 | 4,803,741 | 3,748,954 | 2,726,211 | 4,963,865 |
| 1977 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 3,175,589 | 4,141,766 | 4,560,573 | 4,803,741 | 4,835,439 | 4,803,741 | 4,963,865 |
| 1978 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 3,586,574 | 3,283,035 | 3,650,072 | 4,322,656 | 4,482,462 | 4,827,508 | 3,248,092 | 4,963,865 |
| 1979 | 3,911,541 | 4,483,491 | 4,963,865 | 4,803,741 | 3,975,171 | 3,037,444 | 4,213,141 | 4,520,920 | 4,803,741 | 3,622,065 | 2,549,692 | 884,820 |
| 1980 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 3,364,519 | 3,444,204 | 3,737,308 | 3,434,435 | 4,803,741 | 4,082,037 | 4,803,741 | 4,963,865 |
| 1981 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,078,268 | 4,204,002 | 4,963,865 | 4,259,212 | 4,803,741 | 4,963,865 | 4,803,741 | 4,963,865 |
| 1982 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,577,893 | 3,075,818 | 4,260,725 | 4,963,865 | 4,758,752 | 4,963,865 | 4,803,741 | 4,831,435 |
| 1983 | 4,963,865 | 4,136,838 | 4,963,865 | 4,803,741 | 3,784,838 | 4,403,545 | 3,800,753 | 4,076,809 | 4,803,741 | 3,693,440 | 2,664,813 | 4,963,865 |
| 1984 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 4,803,741 | 4,466,919 | 4,647,809 | 4,803,741 | 4,963,865 | 4,798,386 | 4,963,865 |
| 1985 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 4,803,741 | 4,963,865 | 4,520,920 | 4,803,741 | 3,423,801 | 3,539,731 | 4,963,865 |
| 1986 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 4,803,741 | 4,963,865 | 4,742,976 | 4,803,741 | 4,351,675 | 3,616,479 | 4,963,865 |
| 1987 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 2,936,269 | 2,538,587 | 4,062,461 | 4,068,879 | 4,198,497 | 3,994,801 | 3,746,949 | 4,963,865 |
| 1988 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 4,357,497 | 4,324,169 | 3,854,754 | 4,282,919 | 3,947,217 | 2,311,775 | 2,698,584 |
| 1989 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 3,451,879 | 4,609,669 | 3,791,310 | 4,705,029 | 4,922,675 | 4,698,615 | 4,963,865 |
| 1990 | 4,963,865 | 4,432,631 | 4,963,865 | 3,877,989 | 1,532,562 | 4,257,725 | 3,213,892 | 3,791,310 | 4,674,330 | 4,343,745 | 4,803,741 | 4,963,865 |
| 1991 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 3,943,062 | 4,736,558 | 3,926,129 | 4,620,607 | 4,454,773 | 3,746,949 | 2,656,599 |
| 1992 | 4,852,011 | 2,544,107 | 4,963,865 | 4,803,741 | 2,714,214 | 2,223,923 | 3,356,642 | 3,799,240 | 3,791,737 | 4,304,092 | 2,442,246 | 1,774,908 |
| 1993 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 3,144,890 | 4,086,252 | 4,171,976 | 4,803,741 | 4,963,865 | 4,803,741 | 4,963,865 |
| 1994 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 4,803,741 | 4,963,865 | 4,814,350 | 4,803,741 | 4,105,828 | 4,736,989 | 4,963,865 |
| 1995 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 3,983,102 | 3,344,433 | 4,173,488 | 4,497,128 | 4,803,741 | 3,859,981 | 4,803,741 | 4,963,865 |
| 1996 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,958,559 | 3,689,796 | 4,125,905 | 4,869,864 | 4,803,741 | 3,955,148 | 3,954,167 | 3,420,730 |
| 1997 | 4,963,865 | 4,483,491 | 4,963,865 | 4,194,910 | 3,745,185 | 4,073,532 | 4,963,865 | 4,963,865 | 4,803,741 | 4,026,523 | 4,803,741 | 4,963,865 |
| 1998 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,070,338 | 3,221,637 | 4,371,752 | 4,219,559 | 4,735,728 | 4,240,648 | 3,731,600 | 2,740,569 |
| 1999 | 4,902,393 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 4,265,400 | 4,236,933 | 4,957,100 | 4,803,741 | 4,660,967 | 3,179,019 | 4,963,865 |
| 2000 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 4,495,642 | 4,963,865 | 4,814,350 | 4,803,741 | 4,963,865 | 4,767,688 | 4,963,865 |
| 2001 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 4,803,741 | 4,963,865 | 4,963,865 | 4,803,741 | 4,177,203 | 4,803,741 | 4,151,274 |
| 2002 | 4,003,908 | 4,483,491 | 4,963,865 | 4,803,741 | 4,482,726 | 3,121,866 | 4,514,502 | 4,963,865 | 4,803,741 | 4,256,509 | 4,803,741 | 4,963,865 |
| 2003 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,569,963 | 3,359,782 | 3,999,016 | 3,489,949 | 4,436,414 | 4,779,925 | 2,142,931 | 4,963,865 |
| 2004 | 2,668,777 | 4,483,491 | 4,963,865 | 4,803,741 | 3,412,102 | 2,423,466 | 4,688,974 | 3,553,393 | 3,922,207 | 3,891,704 | 4,803,741 | 4,963,865 |
| 2005 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 3,745,185 | 2,899,299 | 3,523,183 | 3,363,060 | 3,653,592 | 2,876,593 | 2,089,208 | 3,571,877 |
| 2006 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,760,296 | 3,674,446 | 4,363,822 | 4,774,698 | 4,682,005 | 4,074,106 | 4,176,734 | 4,963,865 |
| 2007 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 4,219,352 | 4,530,363 | 4,949,170 | 4,803,741 | 4,954,397 | 3,792,997 | 3,135,231 |
| 2008 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 3,610,366 | 2,630,684 | 4,102,114 | 4,235,420 | 3,768,712 | 2,829,010 | 2,749,235 | 3,597,068 |
| 2009 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,863,393 | 3,543,976 | 4,657,252 | 4,457,476 | 4,803,741 | 4,963,865 | 4,803,741 | 4,963,865 |
| 2010 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 4,803,741 | 4,963,865 | 4,893,656 | 4,803,741 | 3,725,162 | 4,629,542 | 4,963,865 |
| 2011 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 4,794,956 | 4,963,865 | 4,846,073 | 4,803,741 | 4,963,865 | 4,803,741 | 4,562,730 |
| 2012 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 3,183,264 | 4,173,488 | 3,680,282 | 4,313,618 | 3,955,148 | 3,478,334 | 4,963,865 |
| 2013 | 2,979,468 | 4,483,491 | 4,963,865 | 4,803,741 | 4,276,532 | 4,587,739 | 4,963,865 | 4,963,865 | 4,803,741 | 4,963,865 | 4,803,741 | 4,963,865 |
| 2014 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 4,803,741 | 4,451,058 | 4,259,212 | 4,803,741 | 3,875,842 | 2,872,030 | 4,963,865 |
| 2015 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 3,060,468 | 4,963,865 | 4,592,295 | 4,559,209 | 4,938,536 | 3,616,479 | 3,790,201 |
| 2016 | 4,963,865 | 4,432,631 | 4,963,865 | 4,803,741 | 4,963,865 | 4,250,051 | 4,963,865 | 4,679,531 | 4,803,741 | 4,089,967 | 2,756,909 | 2,522,246 |
| 2017 | 2,878,703 | 4,483,491 | 4,963,865 | 4,803,741 | 3,150,394 | 3,114,191 | 4,823,794 | 4,963,865 | 4,803,741 | 4,319,953 | 3,624,153 | 3,244,392 |
| 2018 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 3,665,880 | 2,538,587 | 3,237,684 | 4,917,448 | 4,803,741 | 4,963,865 | 4,614,193 | 4,963,865 |
| 2019 | 3,684,820 | 4,483,491 | 4,963,865 | 4,803,741 | 4,934,768 | 3,190,938 | 3,753,169 | 4,608,156 | 4,505,486 | 4,478,564 | 4,276,505 | 4,963,865 |
| 2020 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 3,927,588 | 4,050,508 | 4,657,252 | 3,918,198 | 4,803,741 | 3,828,259 | 4,803,741 | 4,963,865 |
| 2021 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 4,803,741 | 4,963,865 | 4,560,573 | 4,803,741 | 3,225,537 | 4,568,145 | 4,963,865 |
| 2022 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 4,803,741 | 4,963,865 | 4,963,865 | 4,803,741 | 4,963,865 | 4,803,741 | 4,963,865 |
| 2023 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,347,907 | 3,252,336 | 3,864,197 | 3,489,949 | 3,929,882 | 3,796,537 | 3,839,046 | 4,963,865 |
| 2024 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 2,777,658 | 1,916,934 | 2,928,392 | 3,767,518 | 4,803,741 | 4,153,412 | 2,150,606 | 758,865 |
| 2025 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,268,602 | 4,188,653 | 4,213,141 | 3,482,018 | 4,129,425 | 4,446,842 | 4,803,741 | 4,688,685 |
| 2026 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 4,534,015 | 4,744,488 | 4,354,379 | 4,803,741 | 4,963,865 | 3,593,455 | 4,025,318 |
| 2027 | 4,963,865 | 4,483,491 | 4,963,865 | 4,803,741 | 4,963,865 | 4,426,569 | 4,284,516 | 4,963,865 | 4,803,741 | 4,963,865 | 4,803,741 | 4,963,865 |
| 2028 | 4,726,055 | 4,483,491 | 4,963,865 | 4,803,741 | 4,070,338 | 3,313,734 | 4,070,391 | 4,195,768 | 4,803,741 | 4,803,717 | 4,430,000 | 2,480,260 |
| 2029 | 4,963,865 | 4,455,384 | 4,963,865 | 4,803,741 | 1,802,201 | 3,098,842 | 3,435,947 | 4,084,740 | 4,803,741 | 3,709,301 | 4,276,505 | 4,963,865 |

Factor de planta = 0.92

Cálculo del factor de planta $Q=1.55\text{m}^3/\text{s}$

1. Parámetros de entrada

| Parámetros de entrada | |
|------------------------------------|-------|
| Caudal (m^3/s) | 1.55 |
| Longitud de Canal (m) | 7400 |
| Longitud de la tubería Forzada (m) | 735 |
| Pendiente del canal (m) | 0.001 |
| Diámetro de la tubería forzada (m) | 0.6 |

2. Cálculo de pérdidas de energía en la tubería forzada

| En la tubería forzada | |
|------------------------------------|------------|
| Área del conducto (m^2) | 0.28 |
| Velocidad (m/s) | 5.48 |
| Re | 3289202.16 |
| f | 0.01 |
| Pérdida en el túnel (m) | 23.03 |

3. Cálculo de pérdidas de energía en el canal

| | |
|---------------------|---------------|
| En el canal | EC. Bernoulli |
| Pérdida en el canal | 7.400 |

4. Pérdida total, altura neta y potencia generada

| | |
|------------------------|--------|
| Pérdida total (m) | 30.43 |
| Altura neta (m) | 499.57 |
| Potencia generada (kW) | 6456.8 |

5. Tabla de caudales captados considerando el caudal ecológico

| AÑO | CAUDALES CONSIDERANDO EL CAUDAL ECOLÓGICO (m ³ /s) | | | | | | | | | | |
|------|---|------|------|------|------|------|------|------|------|------|------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Oct | Nov | Dic |
| 1965 | 1.14 | 4.10 | 3.81 | 1.67 | 1.23 | 1.10 | 1.44 | 1.37 | 1.35 | 1.24 | 1.51 |
| 1966 | 4.01 | 3.19 | 3.71 | 2.43 | 0.99 | 1.53 | 1.41 | 1.48 | 1.81 | 1.63 | 1.76 |
| 1967 | 1.49 | 7.76 | 7.21 | 2.42 | 1.37 | 0.95 | 1.63 | 1.92 | 2.31 | 1.78 | 1.30 |
| 1968 | 1.55 | 1.19 | 2.46 | 1.80 | 0.75 | 0.89 | 1.02 | 1.21 | 1.05 | 1.17 | 0.93 |
| 1969 | 0.78 | 2.36 | 3.14 | 3.13 | 1.25 | 0.83 | 1.18 | 1.43 | 1.31 | 1.46 | 4.15 |
| 1970 | 6.02 | 3.09 | 3.20 | 2.97 | 2.00 | 1.36 | 1.53 | 1.54 | 1.99 | 1.40 | 2.72 |
| 1971 | 3.67 | 4.90 | 7.02 | 3.94 | 1.79 | 1.36 | 1.43 | 1.66 | 1.31 | 1.02 | 1.83 |
| 1972 | 4.83 | 4.12 | 8.48 | 5.07 | 1.90 | 1.60 | 1.64 | 1.50 | 1.47 | 1.02 | 2.41 |
| 1973 | 5.27 | 7.28 | 7.00 | 5.56 | 2.04 | 1.54 | 1.66 | 1.42 | 1.83 | 1.90 | 3.40 |
| 1974 | 3.95 | 4.49 | 5.59 | 2.69 | 0.98 | 1.52 | 1.57 | 1.67 | 1.69 | 1.15 | 1.27 |
| 1975 | 2.27 | 2.46 | 6.61 | 2.86 | 1.74 | 1.46 | 1.48 | 1.58 | 1.34 | 1.36 | 1.17 |
| 1976 | 2.74 | 4.80 | 4.44 | 2.56 | 1.10 | 1.32 | 1.45 | 1.56 | 1.21 | 0.91 | 1.77 |
| 1977 | 1.65 | 6.12 | 3.89 | 2.34 | 1.64 | 1.06 | 1.34 | 1.47 | 1.56 | 2.19 | 1.91 |
| 1978 | 2.11 | 4.77 | 2.88 | 1.82 | 1.16 | 1.09 | 1.18 | 1.39 | 1.56 | 1.08 | 1.65 |
| 1979 | 1.26 | 4.64 | 6.15 | 3.04 | 1.28 | 1.01 | 1.36 | 1.46 | 1.17 | 0.85 | 0.29 |
| 1980 | 2.27 | 2.00 | 3.73 | 2.57 | 1.08 | 1.15 | 1.20 | 1.11 | 1.32 | 1.96 | 2.01 |
| 1981 | 2.70 | 7.45 | 6.07 | 2.68 | 1.31 | 1.40 | 1.62 | 1.37 | 1.79 | 1.90 | 2.52 |
| 1982 | 2.29 | 7.79 | 3.39 | 1.80 | 1.48 | 1.02 | 1.37 | 2.09 | 1.68 | 2.09 | 1.56 |
| 1983 | 2.39 | 1.48 | 3.77 | 3.75 | 1.22 | 1.47 | 1.23 | 1.31 | 1.19 | 0.89 | 1.79 |
| 1984 | 2.52 | 8.75 | 6.87 | 4.19 | 2.02 | 1.62 | 1.44 | 1.50 | 1.91 | 1.60 | 3.45 |
| 1985 | 2.06 | 3.63 | 5.04 | 3.95 | 1.78 | 1.60 | 1.73 | 1.46 | 1.10 | 1.18 | 2.24 |
| 1986 | 4.60 | 5.11 | 6.85 | 5.15 | 2.35 | 1.83 | 1.68 | 1.53 | 1.40 | 1.20 | 1.71 |
| 1987 | 4.75 | 4.86 | 3.17 | 1.67 | 0.95 | 0.85 | 1.31 | 1.31 | 1.29 | 1.25 | 2.30 |
| 1988 | 3.87 | 5.54 | 3.43 | 4.01 | 1.73 | 1.45 | 1.39 | 1.24 | 1.27 | 0.77 | 0.87 |
| 1989 | 4.13 | 6.43 | 6.05 | 4.11 | 1.80 | 1.15 | 1.49 | 1.22 | 1.59 | 1.56 | 1.88 |
| 1990 | 2.64 | 1.58 | 1.88 | 1.29 | 0.49 | 1.42 | 1.04 | 1.22 | 1.40 | 2.86 | 2.34 |
| 1991 | 2.09 | 2.64 | 5.23 | 2.42 | 1.80 | 1.31 | 1.53 | 1.27 | 1.44 | 1.25 | 0.86 |
| 1992 | 1.56 | 0.91 | 2.48 | 1.77 | 0.87 | 0.74 | 1.08 | 1.22 | 1.39 | 0.81 | 0.57 |
| 1993 | 2.13 | 4.18 | 5.11 | 3.48 | 1.85 | 1.05 | 1.32 | 1.34 | 1.65 | 2.95 | 4.17 |
| 1994 | 4.88 | 5.44 | 5.37 | 5.33 | 2.63 | 2.00 | 1.66 | 1.55 | 1.32 | 1.58 | 1.70 |
| 1995 | 2.64 | 2.30 | 3.77 | 3.54 | 1.28 | 1.11 | 1.35 | 1.45 | 1.24 | 1.62 | 2.10 |
| 1996 | 3.72 | 5.75 | 5.17 | 3.71 | 1.60 | 1.23 | 1.33 | 1.57 | 1.27 | 1.32 | 1.10 |
| 1997 | 2.25 | 4.51 | 2.97 | 1.40 | 1.21 | 1.36 | 1.70 | 1.73 | 1.30 | 1.68 | 2.71 |
| 1998 | 4.95 | 5.20 | 4.88 | 2.78 | 1.31 | 1.07 | 1.41 | 1.36 | 1.37 | 1.24 | 0.88 |
| 1999 | 1.58 | 4.98 | 4.84 | 3.78 | 2.29 | 1.42 | 1.37 | 1.60 | 1.50 | 1.06 | 2.72 |
| 2000 | 4.43 | 6.03 | 5.55 | 2.80 | 2.29 | 1.50 | 1.79 | 1.55 | 2.12 | 1.59 | 2.68 |
| 2001 | 6.22 | 5.23 | 5.84 | 3.83 | 2.36 | 1.62 | 1.73 | 1.79 | 1.35 | 1.77 | 1.34 |
| 2002 | 1.29 | 3.39 | 5.31 | 3.38 | 1.44 | 1.04 | 1.46 | 1.63 | 1.37 | 1.93 | 2.44 |
| 2003 | 4.06 | 4.55 | 5.38 | 3.57 | 1.47 | 1.12 | 1.29 | 1.12 | 1.54 | 0.71 | 1.77 |
| 2004 | 0.86 | 3.58 | 3.23 | 2.71 | 1.10 | 0.81 | 1.51 | 1.15 | 1.25 | 2.13 | 3.12 |
| 2005 | 3.88 | 3.74 | 4.92 | 3.90 | 1.21 | 0.97 | 1.14 | 1.08 | 0.93 | 0.70 | 1.15 |
| 2006 | 2.83 | 4.19 | 5.68 | 4.63 | 1.53 | 1.22 | 1.41 | 1.54 | 1.31 | 1.39 | 2.37 |
| 2007 | 4.56 | 4.81 | 5.82 | 4.31 | 1.84 | 1.41 | 1.46 | 1.60 | 1.60 | 1.26 | 1.01 |
| 2008 | 4.33 | 5.60 | 4.58 | 2.74 | 1.16 | 0.88 | 1.32 | 1.37 | 0.91 | 0.92 | 1.16 |
| 2009 | 3.49 | 6.71 | 5.79 | 3.45 | 1.57 | 1.18 | 1.50 | 1.44 | 1.78 | 3.07 | 4.49 |
| 2010 | 7.15 | 4.29 | 4.65 | 4.01 | 1.71 | 1.91 | 1.84 | 1.58 | 1.20 | 1.54 | 2.75 |
| 2011 | 3.64 | 6.61 | 8.03 | 6.12 | 2.42 | 1.60 | 1.65 | 1.56 | 2.01 | 1.78 | 1.47 |
| 2012 | 3.37 | 6.49 | 5.47 | 4.49 | 1.73 | 1.06 | 1.35 | 1.19 | 1.27 | 1.16 | 2.51 |
| 2013 | 0.96 | 6.77 | 6.79 | 2.88 | 1.38 | 1.53 | 1.67 | 1.78 | 1.93 | 1.69 | 2.83 |
| 2014 | 3.51 | 3.79 | 5.41 | 3.18 | 1.71 | 1.75 | 1.43 | 1.37 | 1.25 | 0.96 | 1.68 |
| 2015 | 3.94 | 4.51 | 5.27 | 3.47 | 1.91 | 1.02 | 1.64 | 1.48 | 1.59 | 1.20 | 1.22 |
| 2016 | 2.38 | 1.58 | 3.76 | 2.66 | 1.73 | 1.42 | 1.87 | 1.51 | 1.32 | 0.92 | 0.81 |
| 2017 | 0.93 | 2.46 | 4.14 | 1.91 | 1.02 | 1.04 | 1.55 | 1.73 | 1.39 | 1.21 | 1.05 |
| 2018 | 3.13 | 4.54 | 3.12 | 2.52 | 1.18 | 0.85 | 1.04 | 1.59 | 1.86 | 1.54 | 3.61 |
| 2019 | 1.19 | 4.59 | 3.29 | 2.26 | 1.59 | 1.06 | 1.21 | 1.49 | 1.44 | 1.42 | 2.14 |
| 2020 | 1.66 | 4.93 | 3.01 | 2.91 | 1.27 | 1.35 | 1.50 | 1.26 | 1.23 | 1.66 | 3.13 |
| 2021 | 2.84 | 3.70 | 4.55 | 4.62 | 2.30 | 1.76 | 1.85 | 1.47 | 1.04 | 1.52 | 2.78 |
| 2022 | 2.37 | 4.13 | 2.91 | 3.57 | 2.01 | 2.08 | 1.86 | 2.02 | 2.23 | 3.39 | 4.22 |
| 2023 | 6.12 | 2.07 | 4.39 | 2.41 | 1.40 | 1.08 | 1.25 | 1.12 | 1.22 | 1.28 | 2.14 |
| 2024 | 2.99 | 4.99 | 5.78 | 2.39 | 0.90 | 0.64 | 0.94 | 1.21 | 1.34 | 0.72 | 0.24 |
| 2025 | 2.35 | 5.41 | 4.02 | 1.85 | 1.38 | 1.40 | 1.36 | 1.12 | 1.43 | 1.70 | 1.51 |
| 2026 | 4.17 | 5.80 | 5.50 | 3.06 | 1.88 | 1.51 | 1.53 | 1.40 | 1.70 | 1.20 | 1.30 |
| 2027 | 2.60 | 5.61 | 9.23 | 5.03 | 2.35 | 1.47 | 1.38 | 1.64 | 2.02 | 2.33 | 1.86 |
| 2028 | 1.52 | 2.90 | 3.91 | 2.23 | 1.31 | 1.10 | 1.31 | 1.35 | 1.55 | 1.48 | 0.80 |
| 2029 | 1.95 | 1.59 | 2.21 | 1.67 | 0.58 | 1.03 | 1.11 | 1.32 | 1.20 | 1.42 | 3.31 |

6. Tabla de caudales turbinables

| AÑO | CAUDALES TURBINABLES (m³/s) | | | | | | | | | | | |
|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Sep | Oct | Nov | Dic |
| 1965 | 1.14 | 1.55 | 1.55 | 1.55 | 1.23 | 1.10 | 1.44 | 1.37 | 1.55 | 1.35 | 1.24 | 1.51 |
| 1966 | 1.55 | 1.55 | 1.55 | 1.55 | 0.99 | 1.53 | 1.41 | 1.48 | 1.55 | 1.55 | 1.55 | 1.55 |
| 1967 | 1.49 | 1.55 | 1.55 | 1.55 | 1.37 | 0.95 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.30 |
| 1968 | 1.55 | 1.19 | 1.55 | 1.55 | 0.75 | 0.89 | 1.02 | 1.21 | 1.38 | 1.05 | 1.17 | 0.93 |
| 1969 | 0.78 | 1.55 | 1.55 | 1.55 | 1.25 | 0.83 | 1.18 | 1.43 | 1.55 | 1.31 | 1.46 | 1.55 |
| 1970 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.36 | 1.53 | 1.54 | 1.55 | 1.55 | 1.40 | 1.55 |
| 1971 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.36 | 1.43 | 1.55 | 1.55 | 1.31 | 1.02 | 1.55 |
| 1972 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.50 | 1.55 | 1.47 | 1.02 | 1.55 |
| 1973 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.54 | 1.55 | 1.42 | 1.55 | 1.55 | 1.55 | 1.55 |
| 1974 | 1.55 | 1.55 | 1.55 | 1.55 | 0.98 | 1.52 | 1.55 | 1.55 | 1.55 | 1.55 | 1.15 | 1.27 |
| 1975 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.46 | 1.48 | 1.55 | 1.55 | 1.34 | 1.36 | 1.17 |
| 1976 | 1.55 | 1.55 | 1.55 | 1.55 | 1.10 | 1.32 | 1.45 | 1.55 | 1.55 | 1.21 | 0.91 | 1.55 |
| 1977 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.06 | 1.34 | 1.47 | 1.55 | 1.55 | 1.55 | 1.55 |
| 1978 | 1.55 | 1.55 | 1.55 | 1.55 | 1.16 | 1.09 | 1.18 | 1.39 | 1.49 | 1.55 | 1.08 | 1.55 |
| 1979 | 1.26 | 1.55 | 1.55 | 1.55 | 1.28 | 1.01 | 1.36 | 1.46 | 1.55 | 1.17 | 0.85 | 0.29 |
| 1980 | 1.55 | 1.55 | 1.55 | 1.55 | 1.08 | 1.15 | 1.20 | 1.11 | 1.55 | 1.32 | 1.55 | 1.55 |
| 1981 | 1.55 | 1.55 | 1.55 | 1.55 | 1.31 | 1.40 | 1.55 | 1.37 | 1.55 | 1.55 | 1.55 | 1.55 |
| 1982 | 1.55 | 1.55 | 1.55 | 1.55 | 1.48 | 1.02 | 1.37 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 |
| 1983 | 1.55 | 1.48 | 1.55 | 1.55 | 1.22 | 1.47 | 1.23 | 1.31 | 1.55 | 1.19 | 0.89 | 1.55 |
| 1984 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.44 | 1.50 | 1.55 | 1.55 | 1.55 | 1.55 |
| 1985 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.46 | 1.55 | 1.10 | 1.18 | 1.55 |
| 1986 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.53 | 1.55 | 1.40 | 1.20 | 1.55 |
| 1987 | 1.55 | 1.55 | 1.55 | 1.55 | 0.95 | 0.85 | 1.31 | 1.31 | 1.40 | 1.29 | 1.25 | 1.55 |
| 1988 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.45 | 1.39 | 1.24 | 1.43 | 1.27 | 0.77 | 0.87 |
| 1989 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.15 | 1.49 | 1.22 | 1.55 | 1.55 | 1.55 | 1.55 |
| 1990 | 1.55 | 1.55 | 1.55 | 1.29 | 0.49 | 1.42 | 1.04 | 1.22 | 1.55 | 1.40 | 1.55 | 1.55 |
| 1991 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.31 | 1.53 | 1.27 | 1.54 | 1.44 | 1.25 | 0.86 |
| 1992 | 1.55 | 0.91 | 1.55 | 1.55 | 0.87 | 0.74 | 1.08 | 1.22 | 1.26 | 1.39 | 0.81 | 0.57 |
| 1993 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.05 | 1.32 | 1.34 | 1.55 | 1.55 | 1.55 | 1.55 |
| 1994 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.32 | 1.55 | 1.55 |
| 1995 | 1.55 | 1.55 | 1.55 | 1.55 | 1.28 | 1.11 | 1.35 | 1.45 | 1.55 | 1.24 | 1.55 | 1.55 |
| 1996 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.23 | 1.33 | 1.55 | 1.55 | 1.27 | 1.32 | 1.10 |
| 1997 | 1.55 | 1.55 | 1.55 | 1.40 | 1.21 | 1.36 | 1.55 | 1.55 | 1.55 | 1.30 | 1.55 | 1.55 |
| 1998 | 1.55 | 1.55 | 1.55 | 1.55 | 1.31 | 1.07 | 1.41 | 1.36 | 1.55 | 1.37 | 1.24 | 0.88 |
| 1999 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.42 | 1.37 | 1.55 | 1.55 | 1.50 | 1.06 | 1.55 |
| 2000 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.50 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 |
| 2001 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.35 | 1.55 | 1.34 |
| 2002 | 1.29 | 1.55 | 1.55 | 1.55 | 1.44 | 1.04 | 1.46 | 1.55 | 1.55 | 1.37 | 1.55 | 1.55 |
| 2003 | 1.55 | 1.55 | 1.55 | 1.55 | 1.47 | 1.12 | 1.29 | 1.12 | 1.48 | 1.54 | 0.71 | 1.55 |
| 2004 | 0.86 | 1.55 | 1.55 | 1.55 | 1.10 | 0.81 | 1.51 | 1.15 | 1.31 | 1.25 | 1.55 | 1.55 |
| 2005 | 1.55 | 1.55 | 1.55 | 1.55 | 1.21 | 0.97 | 1.14 | 1.08 | 1.22 | 0.93 | 0.70 | 1.15 |
| 2006 | 1.55 | 1.55 | 1.55 | 1.55 | 1.53 | 1.22 | 1.41 | 1.54 | 1.55 | 1.31 | 1.39 | 1.55 |
| 2007 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.41 | 1.46 | 1.55 | 1.55 | 1.55 | 1.26 | 1.01 |
| 2008 | 1.55 | 1.55 | 1.55 | 1.55 | 1.16 | 0.88 | 1.32 | 1.37 | 1.26 | 0.91 | 0.92 | 1.16 |
| 2009 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.18 | 1.50 | 1.44 | 1.55 | 1.55 | 1.55 | 1.55 |
| 2010 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.20 | 1.54 | 1.55 |
| 2011 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.47 |
| 2012 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.06 | 1.35 | 1.19 | 1.44 | 1.27 | 1.16 | 1.55 |
| 2013 | 0.96 | 1.55 | 1.55 | 1.55 | 1.38 | 1.53 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 |
| 2014 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.43 | 1.37 | 1.55 | 1.25 | 0.96 | 1.55 |
| 2015 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.02 | 1.55 | 1.48 | 1.52 | 1.55 | 1.20 | 1.22 |
| 2016 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.42 | 1.55 | 1.51 | 1.55 | 1.32 | 0.92 | 0.81 |
| 2017 | 0.93 | 1.55 | 1.55 | 1.55 | 1.02 | 1.04 | 1.55 | 1.55 | 1.55 | 1.39 | 1.21 | 1.05 |
| 2018 | 1.55 | 1.55 | 1.55 | 1.55 | 1.18 | 0.85 | 1.04 | 1.55 | 1.55 | 1.55 | 1.54 | 1.55 |
| 2019 | 1.19 | 1.55 | 1.55 | 1.55 | 1.55 | 1.06 | 1.21 | 1.49 | 1.50 | 1.44 | 1.42 | 1.55 |
| 2020 | 1.55 | 1.55 | 1.55 | 1.55 | 1.27 | 1.35 | 1.50 | 1.26 | 1.55 | 1.23 | 1.55 | 1.55 |
| 2021 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.47 | 1.55 | 1.04 | 1.52 | 1.55 |
| 2022 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 |
| 2023 | 1.55 | 1.55 | 1.55 | 1.55 | 1.40 | 1.08 | 1.25 | 1.12 | 1.31 | 1.22 | 1.28 | 1.55 |
| 2024 | 1.55 | 1.55 | 1.55 | 1.55 | 0.90 | 0.64 | 0.94 | 1.21 | 1.55 | 1.34 | 0.72 | 0.24 |
| 2025 | 1.55 | 1.55 | 1.55 | 1.55 | 1.38 | 1.40 | 1.36 | 1.12 | 1.38 | 1.43 | 1.55 | 1.51 |
| 2026 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.51 | 1.53 | 1.40 | 1.55 | 1.55 | 1.20 | 1.30 |
| 2027 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 | 1.47 | 1.38 | 1.55 | 1.55 | 1.55 | 1.55 | 1.55 |
| 2028 | 1.52 | 1.55 | 1.55 | 1.55 | 1.31 | 1.10 | 1.31 | 1.35 | 1.55 | 1.55 | 1.48 | 0.80 |
| 2029 | 1.55 | 1.55 | 1.55 | 1.55 | 0.58 | 1.03 | 1.11 | 1.32 | 1.55 | 1.20 | 1.42 | 1.55 |

Los caudales turbinables se obtuvieron bajo la condición: si $Q_{captado} > Q_{diseño}$ entonces el caudal turbinable será el $Q_{diseño}$. En caso contrario será el $Q_{captado}$.

7. Tabla de potencias efectivas

| AÑO | POTENCIAS EFECTIVAS (kW) | | | | | | | | | | | |
|------|--------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Sep | Oct | Nov | Dic |
| 1965 | 4756.04 | 6456.84 | 6456.84 | 6456.84 | 5103.31 | 4597.76 | 6008.51 | 5687.02 | 6456.84 | 5619.50 | 5166.90 | 6306.91 |
| 1966 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 4123.64 | 6365.42 | 5891.37 | 6144.91 | 6456.84 | 6456.84 | 6456.84 | 6456.84 |
| 1967 | 6199.24 | 6456.84 | 6456.84 | 6456.84 | 5699.63 | 3948.20 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 5416.19 |
| 1968 | 6456.84 | 4954.65 | 6456.84 | 6456.84 | 3122.67 | 3692.63 | 4230.20 | 5058.75 | 5750.82 | 4362.97 | 4858.09 | 3860.24 |
| 1969 | 3256.47 | 6456.84 | 6456.84 | 6456.84 | 5188.50 | 3437.07 | 4922.35 | 5953.24 | 6456.84 | 5438.47 | 6093.32 | 6456.84 |
| 1970 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 5662.62 | 6381.21 | 6432.42 | 6456.84 | 6456.84 | 5837.76 | 6456.84 |
| 1971 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 5673.27 | 5955.27 | 6456.84 | 6456.84 | 5470.42 | 4229.82 | 6456.84 |
| 1972 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6230.10 | 6456.84 | 6109.33 | 4240.47 | 6456.84 |
| 1973 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6397.37 | 6456.84 | 5931.94 | 6456.84 | 6456.84 | 6456.84 | 6456.84 |
| 1974 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 4081.04 | 6312.18 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 4794.19 | 5303.44 |
| 1975 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6099.21 | 6157.59 | 6456.84 | 6456.84 | 5598.20 | 5667.38 | 4863.71 |
| 1976 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 4570.88 | 5513.54 | 6029.81 | 6456.84 | 6456.84 | 5033.83 | 3782.58 | 6456.84 |
| 1977 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 4406.09 | 5561.27 | 6123.61 | 6456.84 | 6456.84 | 6456.84 | 6456.84 |
| 1978 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 4815.80 | 4555.17 | 4901.06 | 5804.16 | 6219.36 | 6456.84 | 4506.68 | 6456.84 |
| 1979 | 5252.14 | 6456.84 | 6456.84 | 6456.84 | 5337.58 | 4214.41 | 5657.11 | 6070.37 | 6456.84 | 4863.45 | 3537.66 | 1188.07 |
| 1980 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 4517.64 | 4778.79 | 5018.19 | 4611.51 | 6456.84 | 5481.07 | 6456.84 | 6456.84 |
| 1981 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 5476.01 | 5833.00 | 6456.84 | 5718.97 | 6456.84 | 6456.84 | 6456.84 | 6456.84 |
| 1982 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6146.87 | 4267.66 | 5721.00 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 |
| 1983 | 6456.84 | 6149.79 | 6456.84 | 6456.84 | 5082.01 | 6109.86 | 5103.38 | 5474.05 | 6456.84 | 4959.29 | 3697.39 | 6456.84 |
| 1984 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 5997.86 | 6240.75 | 6456.84 | 6456.84 | 6456.84 | 6456.84 |
| 1985 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6070.37 | 6456.84 | 4597.24 | 4911.33 | 6456.84 |
| 1986 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6368.53 | 6456.84 | 5843.12 | 5017.82 | 6456.84 |
| 1987 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 3942.61 | 3522.25 | 5454.78 | 5463.40 | 5825.36 | 5363.93 | 5198.84 | 6456.84 |
| 1988 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6045.97 | 5806.19 | 5175.89 | 5942.49 | 5300.04 | 3207.56 | 3623.47 |
| 1989 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 4789.44 | 6189.53 | 5090.70 | 6456.84 | 6456.84 | 6456.84 | 6456.84 |
| 1990 | 6456.84 | 6456.84 | 6456.84 | 5380.66 | 2057.82 | 5907.54 | 4315.39 | 5090.70 | 6456.84 | 5832.47 | 6456.84 | 6456.84 |
| 1991 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 5470.94 | 6359.91 | 5271.73 | 6411.03 | 5981.55 | 5198.84 | 3567.09 |
| 1992 | 6456.84 | 3782.05 | 6456.84 | 6456.84 | 3644.45 | 3085.66 | 4507.06 | 5101.35 | 5260.98 | 5779.23 | 3388.58 | 2383.22 |
| 1993 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 4363.49 | 5486.73 | 5601.83 | 6456.84 | 6456.84 | 6456.84 |
| 1994 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 5513.01 | 6456.84 | 6456.84 |
| 1995 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 5348.23 | 4640.36 | 5603.86 | 6038.42 | 6456.84 | 5182.91 | 6456.84 | 6456.84 |
| 1996 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 5119.54 | 5539.97 | 6456.84 | 6456.84 | 5310.69 | 5486.35 | 4593.11 |
| 1997 | 6456.84 | 6456.84 | 6456.84 | 5820.38 | 5028.77 | 5651.97 | 6456.84 | 6456.84 | 6456.84 | 5406.53 | 6456.84 | 6456.84 |
| 1998 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 5465.36 | 4469.98 | 5870.08 | 5665.72 | 6456.84 | 5694.04 | 5177.54 | 3679.84 |
| 1999 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 5918.18 | 5689.05 | 6456.84 | 6456.84 | 6258.41 | 4410.85 | 6456.84 |
| 2000 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6237.64 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 |
| 2001 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 5608.85 | 6456.84 | 5574.03 |
| 2002 | 5376.16 | 6456.84 | 6456.84 | 6456.84 | 6019.09 | 4331.55 | 6061.75 | 6456.84 | 6456.84 | 5715.34 | 6456.84 | 6456.84 |
| 2003 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6136.22 | 4661.65 | 5369.59 | 4686.05 | 6155.46 | 6418.14 | 2973.29 | 6456.84 |
| 2004 | 3583.44 | 6456.84 | 6456.84 | 6456.84 | 4581.53 | 3362.53 | 6296.02 | 4771.24 | 5442.01 | 5225.50 | 6456.84 | 6456.84 |
| 2005 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 5028.77 | 4022.74 | 4730.68 | 4515.68 | 5069.31 | 3862.48 | 2898.75 | 4796.06 |
| 2006 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6391.79 | 5098.24 | 5859.43 | 6411.12 | 6456.84 | 5470.42 | 5795.16 | 6456.84 |
| 2007 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 5854.29 | 6083.05 | 6456.84 | 6456.84 | 6456.84 | 5262.73 | 4209.76 |
| 2008 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 4847.74 | 3650.04 | 5508.03 | 5687.02 | 5229.04 | 3798.59 | 3814.53 | 4829.89 |
| 2009 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 4917.22 | 6253.43 | 5985.18 | 6456.84 | 6456.84 | 6456.84 | 6456.84 |
| 2010 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 5001.88 | 6423.43 | 6456.84 |
| 2011 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6126.51 |
| 2012 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 4416.74 | 5603.86 | 4941.62 | 5985.09 | 5310.69 | 4826.14 | 6456.84 |
| 2013 | 4000.62 | 6456.84 | 6456.84 | 6456.84 | 5742.22 | 6365.42 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 |
| 2014 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 5976.56 | 5718.97 | 6456.84 | 5204.21 | 3984.90 | 6456.84 |
| 2015 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 4246.36 | 6456.84 | 6166.21 | 6325.84 | 6456.84 | 5017.82 | 5089.21 |
| 2016 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 5896.89 | 6456.84 | 6283.34 | 6456.84 | 5491.72 | 3825.17 | 3386.69 |
| 2017 | 3865.32 | 6456.84 | 6456.84 | 6456.84 | 4230.12 | 4320.90 | 6456.84 | 6456.84 | 6456.84 | 5800.53 | 5028.46 | 4356.34 |
| 2018 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 4922.28 | 3522.25 | 4347.33 | 6456.84 | 6456.84 | 6456.84 | 6402.13 | 6456.84 |
| 2019 | 4947.71 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 4427.38 | 5039.49 | 6187.50 | 6251.30 | 6013.50 | 5933.59 | 6456.84 |
| 2020 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 5273.69 | 5620.02 | 6253.43 | 5261.08 | 6456.84 | 5140.31 | 6456.84 | 6456.84 |
| 2021 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6123.61 | 6456.84 | 4331.02 | 6338.24 | 6456.84 |
| 2022 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 |
| 2023 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 5838.06 | 4512.57 | 5188.57 | 4686.05 | 5452.66 | 5097.72 | 5326.62 | 6456.84 |
| 2024 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 3729.64 | 2659.72 | 3932.04 | 5058.75 | 6456.84 | 5576.91 | 2983.94 | 1018.95 |
| 2025 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 5731.57 | 5811.70 | 5657.11 | 4675.41 | 5729.52 | 5970.90 | 6456.84 | 6295.63 |
| 2026 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6290.88 | 6370.56 | 5846.75 | 6456.84 | 6456.84 | 4985.87 | 5404.91 |
| 2027 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6141.80 | 5752.94 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 6456.84 |
| 2028 | 6345.81 | 6456.84 | 6456.84 | 6456.84 | 5465.36 | 4597.76 | 5465.43 | 5633.78 | 6456.84 | 6450.09 | 6146.56 | 3330.32 |
| 2029 | 6456.84 | 6456.84 | 6456.84 | 6456.84 | 2419.87 | 4299.60 | 4613.55 | 5484.70 | 6456.84 | 4980.59 | 5933.59 | 6456.84 |

8. Tabla de energía producida

| AÑO | ENERGÍA (kWh) | | | | | | | | | | | |
|------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Sep | Oct | Nov | Dic |
| 1965 | 3,538,494 | 4,338,996 | 4,803,889 | 4,648,924 | 3,796,861 | 3,310,388 | 4,470,331 | 4,231,143 | 4,648,924 | 4,180,908 | 3,720,164 | 4,692,339 |
| 1966 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 3,067,987 | 4,583,106 | 4,383,183 | 4,571,813 | 4,648,924 | 4,803,889 | 4,648,924 | 4,803,889 |
| 1967 | 4,612,231 | 4,338,996 | 4,803,889 | 4,648,924 | 4,240,524 | 2,842,702 | 4,803,889 | 4,803,889 | 4,648,924 | 4,803,889 | 4,648,924 | 4,029,642 |
| 1968 | 4,803,889 | 3,329,522 | 4,803,889 | 4,648,924 | 2,323,269 | 2,658,695 | 3,147,266 | 3,763,714 | 4,140,589 | 3,246,048 | 3,497,822 | 2,872,019 |
| 1969 | 2,422,813 | 4,338,996 | 4,803,889 | 4,648,924 | 3,860,242 | 2,474,688 | 3,662,231 | 4,429,207 | 4,648,924 | 4,046,225 | 4,387,191 | 4,803,889 |
| 1970 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 4,077,086 | 4,747,620 | 4,785,721 | 4,648,924 | 4,803,889 | 4,203,184 | 4,803,889 |
| 1971 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 4,084,752 | 4,430,718 | 4,803,889 | 4,648,924 | 4,069,992 | 3,045,471 | 4,803,889 |
| 1972 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 4,648,924 | 4,803,889 | 4,635,193 | 4,648,924 | 4,545,345 | 3,053,138 | 4,803,889 |
| 1973 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 4,606,107 | 4,803,889 | 4,413,362 | 4,648,924 | 4,803,889 | 4,648,924 | 4,803,889 |
| 1974 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 3,036,297 | 4,544,771 | 4,803,889 | 4,803,889 | 4,648,924 | 4,803,889 | 3,451,820 | 3,945,756 |
| 1975 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 4,391,432 | 4,581,246 | 4,803,889 | 4,648,924 | 4,165,063 | 4,080,512 | 3,618,602 |
| 1976 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 3,400,734 | 3,969,748 | 4,486,176 | 4,803,889 | 4,648,924 | 3,745,168 | 2,723,458 | 4,803,889 |
| 1977 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 3,172,382 | 4,137,584 | 4,555,968 | 4,648,924 | 4,803,889 | 4,648,924 | 4,803,889 |
| 1978 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 3,582,953 | 3,279,720 | 3,646,386 | 4,318,291 | 4,477,936 | 4,803,889 | 3,244,812 | 4,803,889 |
| 1979 | 3,907,591 | 4,338,996 | 4,803,889 | 4,648,924 | 3,971,157 | 3,034,377 | 4,208,887 | 4,516,355 | 4,648,924 | 3,618,407 | 2,547,117 | 883,927 |
| 1980 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 3,361,121 | 3,440,727 | 3,733,534 | 3,430,967 | 4,648,924 | 4,077,915 | 4,648,924 | 4,803,889 |
| 1981 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,074,150 | 4,199,757 | 4,803,889 | 4,254,911 | 4,648,924 | 4,803,889 | 4,648,924 | 4,803,889 |
| 1982 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,573,270 | 3,072,712 | 4,256,422 | 4,803,889 | 4,648,924 | 4,803,889 | 4,648,924 | 4,803,889 |
| 1983 | 4,803,889 | 4,132,661 | 4,803,889 | 4,648,924 | 3,781,016 | 4,399,098 | 3,796,915 | 4,072,693 | 4,648,924 | 3,689,710 | 2,662,122 | 4,803,889 |
| 1984 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 4,648,924 | 4,462,408 | 4,643,116 | 4,648,924 | 4,803,889 | 4,648,924 | 4,803,889 |
| 1985 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 4,648,924 | 4,803,889 | 4,516,355 | 4,648,924 | 3,420,344 | 3,536,157 | 4,803,889 |
| 1986 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 4,648,924 | 4,803,889 | 4,738,186 | 4,648,924 | 4,347,281 | 3,612,827 | 4,803,889 |
| 1987 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 2,933,304 | 2,536,023 | 4,058,359 | 4,064,770 | 4,194,258 | 3,990,767 | 3,743,165 | 4,803,889 |
| 1988 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 4,353,097 | 4,319,802 | 3,850,861 | 4,278,594 | 3,943,232 | 2,309,441 | 2,695,859 |
| 1989 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 3,448,393 | 4,605,014 | 3,787,481 | 4,648,924 | 4,803,889 | 4,648,924 | 4,803,889 |
| 1990 | 4,803,889 | 4,338,996 | 4,803,889 | 3,874,073 | 1,531,014 | 4,253,426 | 3,210,647 | 3,787,481 | 4,648,924 | 4,339,359 | 4,648,924 | 4,803,889 |
| 1991 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 3,939,080 | 4,731,775 | 3,922,164 | 4,615,941 | 4,450,274 | 3,743,165 | 2,653,916 |
| 1992 | 4,803,889 | 2,541,538 | 4,803,889 | 4,648,924 | 2,711,473 | 2,221,677 | 3,353,252 | 3,795,404 | 3,787,908 | 4,299,746 | 2,439,780 | 1,773,116 |
| 1993 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 3,141,714 | 4,082,126 | 4,167,763 | 4,648,924 | 4,803,889 | 4,648,924 | 4,803,889 |
| 1994 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 4,648,924 | 4,803,889 | 4,803,889 | 4,648,924 | 4,101,682 | 4,648,924 | 4,803,889 |
| 1995 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 3,979,080 | 3,341,056 | 4,169,274 | 4,492,587 | 4,648,924 | 3,856,084 | 4,648,924 | 4,803,889 |
| 1996 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 3,686,070 | 4,121,739 | 4,803,889 | 4,648,924 | 3,951,154 | 3,950,174 | 3,417,276 |
| 1997 | 4,803,889 | 4,338,996 | 4,803,889 | 4,190,674 | 3,741,403 | 4,069,419 | 4,803,889 | 4,803,889 | 4,648,924 | 4,022,457 | 4,648,924 | 4,803,889 |
| 1998 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,066,228 | 3,218,384 | 4,367,338 | 4,215,298 | 4,648,924 | 4,236,366 | 3,727,831 | 2,737,802 |
| 1999 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 4,261,093 | 4,232,654 | 4,803,889 | 4,648,924 | 4,656,260 | 3,175,809 | 4,803,889 |
| 2000 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 4,491,102 | 4,803,889 | 4,803,889 | 4,648,924 | 4,803,889 | 4,648,924 | 4,803,889 |
| 2001 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 4,648,924 | 4,803,889 | 4,803,889 | 4,648,924 | 4,172,985 | 4,648,924 | 4,147,082 |
| 2002 | 3,999,865 | 4,338,996 | 4,803,889 | 4,648,924 | 4,478,200 | 3,118,714 | 4,509,943 | 4,803,889 | 4,648,924 | 4,252,211 | 4,648,924 | 4,803,889 |
| 2003 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,565,348 | 3,356,390 | 3,994,978 | 3,486,425 | 4,431,934 | 4,775,098 | 2,140,767 | 4,803,889 |
| 2004 | 2,666,082 | 4,338,996 | 4,803,889 | 4,648,924 | 3,408,657 | 2,421,019 | 4,684,239 | 3,918,246 | 3,887,774 | 3,887,774 | 4,648,924 | 4,803,889 |
| 2005 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 3,741,403 | 2,896,371 | 3,519,626 | 3,359,664 | 3,649,902 | 2,873,688 | 2,087,099 | 3,568,270 |
| 2006 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,755,489 | 3,670,736 | 4,359,415 | 4,769,876 | 4,648,924 | 4,069,992 | 4,172,516 | 4,803,889 |
| 2007 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 4,215,091 | 4,525,789 | 4,803,889 | 4,648,924 | 4,803,889 | 3,789,167 | 3,132,065 |
| 2008 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 3,606,720 | 2,628,027 | 4,097,971 | 4,231,143 | 3,764,907 | 2,826,153 | 2,746,459 | 3,593,436 |
| 2009 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 3,540,397 | 4,652,549 | 4,452,975 | 4,648,924 | 4,803,889 | 4,648,924 | 4,803,889 |
| 2010 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 4,648,924 | 4,803,889 | 4,803,889 | 4,648,924 | 3,721,400 | 4,624,868 | 4,803,889 |
| 2011 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 4,648,924 | 4,803,889 | 4,803,889 | 4,648,924 | 4,803,889 | 4,648,924 | 4,558,122 |
| 2012 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 3,180,049 | 4,169,274 | 3,676,566 | 4,309,262 | 3,951,154 | 3,474,821 | 4,803,889 |
| 2013 | 2,976,459 | 4,338,996 | 4,803,889 | 4,648,924 | 4,272,214 | 4,583,106 | 4,803,889 | 4,803,889 | 4,648,924 | 4,803,889 | 4,648,924 | 4,803,889 |
| 2014 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 4,648,924 | 4,446,563 | 4,254,911 | 4,648,924 | 3,871,929 | 2,869,130 | 4,803,889 |
| 2015 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 3,057,378 | 4,803,889 | 4,587,658 | 4,554,605 | 4,803,889 | 3,612,827 | 3,786,373 |
| 2016 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 4,245,759 | 4,803,889 | 4,674,806 | 4,648,924 | 4,085,837 | 2,754,126 | 2,519,699 |
| 2017 | 2,875,796 | 4,338,996 | 4,803,889 | 4,648,924 | 3,147,213 | 3,111,047 | 4,803,889 | 4,803,889 | 4,648,924 | 4,315,591 | 3,620,494 | 3,241,116 |
| 2018 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 3,662,178 | 2,536,023 | 3,234,414 | 4,803,889 | 4,648,924 | 4,803,889 | 4,609,534 | 4,803,889 |
| 2019 | 3,681,099 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 3,187,716 | 3,749,379 | 4,603,503 | 4,500,937 | 4,474,042 | 4,272,187 | 4,803,889 |
| 2020 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 3,923,622 | 4,046,418 | 4,652,549 | 3,914,242 | 4,648,924 | 3,824,393 | 4,648,924 | 4,803,889 |
| 2021 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 4,648,924 | 4,803,889 | 4,555,968 | 4,648,924 | 3,222,280 | 4,563,532 | 4,803,889 |
| 2022 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 4,648,924 | 4,803,889 | 4,803,889 | 4,648,924 | 4,803,889 | 4,648,924 | 4,803,889 |
| 2023 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,343,517 | 3,249,052 | 3,860,295 | 3,486,425 | 3,925,913 | 3,792,703 | 3,835,169 | 4,803,889 |
| 2024 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 2,774,853 | 1,914,998 | 2,925,435 | 3,763,714 | 4,648,924 | 4,149,218 | 2,148,434 | 758,098 |
| 2025 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,264,291 | 4,184,423 | 4,208,887 | 3,478,502 | 4,125,255 | 4,442,352 | 4,648,924 | 4,683,951 |
| 2026 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 4,529,437 | 4,739,697 | 4,349,982 | 4,648,924 | 4,803,889 | 3,589,826 | 4,021,253 |
| 2027 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 4,803,889 | 4,422,099 | 4,280,190 | 4,803,889 | 4,648,924 | 4,803,889 | 4,648,924 | 4,803,889 |
| 2028 | 4,721,282 | 4,338,996 | 4,803,889 | 4,648,924 | 4,066,228 | 3,310,388 | 4,066,281 | 4,191,531 | 4,648,924 | 4,798,866 | 4,425,526 | 2,477,756 |
| 2029 | 4,803,889 | 4,338,996 | 4,803,889 | 4,648,924 | 1,800,381 | 3,095,713 | 3,432,478 | 4,080,615 | 4,648,924 | 3,705,555 | 4,272,187 | 4,803,889 |

Factor de planta = 0.93

Cálculo del factor de planta $Q=1.50\text{m}^3/\text{s}$

1. Parámetros de entrada

| Parámetros de entrada | |
|------------------------------------|-------|
| Caudal (m^3/s) | 1.5 |
| Longitud de Canal (m) | 7400 |
| Longitud de la tubería Forzada (m) | 735 |
| Pendiente del canal (m) | 0.001 |
| Diámetro de la tubería forzada (m) | 0.6 |

2. Cálculo de pérdidas de energía en la tubería forzada

| En la tubería forzada | |
|------------------------------------|------------|
| Área del conducto (m^2) | 0.28 |
| Velocidad (m/s) | 5.31 |
| Re | 3183098.86 |
| f | 0.01 |
| Pérdida en el túnel (m) | 21.60 |

3. Cálculo de pérdidas de energía en el canal

| | |
|---------------------|---------------|
| En el canal | EC. Bernoulli |
| Pérdida en el canal | 7.400 |

4. Pérdida total, altura neta y potencia generada

| | |
|------------------------|--------|
| Pérdida total (m) | 29.00 |
| Altura neta (m) | 501.00 |
| Potencia generada (kW) | 6266.4 |

5. Tabla de caudales captados considerando el caudal ecológico

| AÑO | CAUDALES CONSIDERANDO EL CAUDAL ECOLÓGICO (m³/s) | | | | | | | | | | |
|------|--|------|------|------|------|------|------|------|------|------|------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Oct | Nov | Dic |
| 1965 | 1.14 | 4.10 | 3.81 | 1.67 | 1.23 | 1.10 | 1.44 | 1.37 | 1.35 | 1.24 | 1.51 |
| 1966 | 4.01 | 3.19 | 3.71 | 2.43 | 0.99 | 1.53 | 1.41 | 1.48 | 1.81 | 1.63 | 1.76 |
| 1967 | 1.49 | 7.76 | 7.21 | 2.42 | 1.37 | 0.95 | 1.63 | 1.92 | 2.31 | 1.78 | 1.30 |
| 1968 | 1.55 | 1.19 | 2.46 | 1.80 | 0.75 | 0.89 | 1.02 | 1.21 | 1.05 | 1.17 | 0.93 |
| 1969 | 0.78 | 2.36 | 3.14 | 3.13 | 1.25 | 0.83 | 1.18 | 1.43 | 1.31 | 1.46 | 4.15 |
| 1970 | 6.02 | 3.09 | 3.20 | 2.97 | 2.00 | 1.36 | 1.53 | 1.54 | 1.99 | 1.40 | 2.72 |
| 1971 | 3.67 | 4.90 | 7.02 | 3.94 | 1.79 | 1.36 | 1.43 | 1.66 | 1.31 | 1.02 | 1.83 |
| 1972 | 4.83 | 4.12 | 8.48 | 5.07 | 1.90 | 1.60 | 1.64 | 1.50 | 1.47 | 1.02 | 2.41 |
| 1973 | 5.27 | 7.28 | 7.00 | 5.56 | 2.04 | 1.54 | 1.66 | 1.42 | 1.83 | 1.90 | 3.40 |
| 1974 | 3.95 | 4.49 | 5.59 | 2.69 | 0.98 | 1.52 | 1.57 | 1.67 | 1.69 | 1.15 | 1.27 |
| 1975 | 2.27 | 2.46 | 6.61 | 2.86 | 1.74 | 1.46 | 1.48 | 1.58 | 1.34 | 1.36 | 1.17 |
| 1976 | 2.74 | 4.80 | 4.44 | 2.56 | 1.10 | 1.32 | 1.45 | 1.56 | 1.21 | 0.91 | 1.77 |
| 1977 | 1.65 | 6.12 | 3.89 | 2.34 | 1.64 | 1.06 | 1.34 | 1.47 | 1.56 | 2.19 | 1.91 |
| 1978 | 2.11 | 4.77 | 2.88 | 1.82 | 1.16 | 1.09 | 1.18 | 1.39 | 1.56 | 1.08 | 1.65 |
| 1979 | 1.26 | 4.64 | 6.15 | 3.04 | 1.28 | 1.01 | 1.36 | 1.46 | 1.17 | 0.85 | 0.29 |
| 1980 | 2.27 | 2.00 | 3.73 | 2.57 | 1.08 | 1.15 | 1.20 | 1.11 | 1.32 | 1.96 | 2.01 |
| 1981 | 2.70 | 7.45 | 6.07 | 2.68 | 1.31 | 1.40 | 1.62 | 1.37 | 1.79 | 1.90 | 2.52 |
| 1982 | 2.29 | 7.79 | 3.39 | 1.80 | 1.48 | 1.02 | 1.37 | 2.09 | 1.68 | 2.09 | 1.56 |
| 1983 | 2.39 | 1.48 | 3.77 | 3.75 | 1.22 | 1.47 | 1.23 | 1.31 | 1.19 | 0.89 | 1.79 |
| 1984 | 2.52 | 8.75 | 6.87 | 4.19 | 2.02 | 1.62 | 1.44 | 1.50 | 1.91 | 1.60 | 3.45 |
| 1985 | 2.06 | 3.63 | 5.04 | 3.95 | 1.78 | 1.60 | 1.73 | 1.46 | 1.10 | 1.18 | 2.24 |
| 1986 | 4.60 | 5.11 | 6.85 | 5.15 | 2.35 | 1.83 | 1.68 | 1.53 | 1.40 | 1.20 | 1.71 |
| 1987 | 4.75 | 4.86 | 3.17 | 1.67 | 0.95 | 0.85 | 1.31 | 1.31 | 1.29 | 1.25 | 2.30 |
| 1988 | 3.87 | 5.54 | 3.43 | 4.01 | 1.73 | 1.45 | 1.39 | 1.24 | 1.27 | 0.77 | 0.87 |
| 1989 | 4.13 | 6.43 | 6.05 | 4.11 | 1.80 | 1.15 | 1.49 | 1.22 | 1.59 | 1.56 | 1.88 |
| 1990 | 2.64 | 1.58 | 1.88 | 1.29 | 0.49 | 1.42 | 1.04 | 1.22 | 1.40 | 2.86 | 2.34 |
| 1991 | 2.09 | 2.64 | 5.23 | 2.42 | 1.80 | 1.31 | 1.53 | 1.27 | 1.44 | 1.25 | 0.86 |
| 1992 | 1.56 | 0.91 | 2.48 | 1.77 | 0.87 | 0.74 | 1.08 | 1.22 | 1.39 | 0.81 | 0.57 |
| 1993 | 2.13 | 4.18 | 5.11 | 3.48 | 1.85 | 1.05 | 1.32 | 1.34 | 1.65 | 2.95 | 4.17 |
| 1994 | 4.88 | 5.44 | 5.37 | 5.33 | 2.63 | 2.00 | 1.66 | 1.55 | 1.32 | 1.58 | 1.70 |
| 1995 | 2.64 | 2.30 | 3.77 | 3.54 | 1.28 | 1.11 | 1.35 | 1.45 | 1.24 | 1.62 | 2.10 |
| 1996 | 3.72 | 5.75 | 5.17 | 3.71 | 1.60 | 1.23 | 1.33 | 1.57 | 1.27 | 1.32 | 1.10 |
| 1997 | 2.25 | 4.51 | 2.97 | 1.40 | 1.21 | 1.36 | 1.70 | 1.73 | 1.30 | 1.68 | 2.71 |
| 1998 | 4.95 | 5.20 | 4.88 | 2.78 | 1.31 | 1.07 | 1.41 | 1.36 | 1.37 | 1.24 | 0.88 |
| 1999 | 1.58 | 4.98 | 4.84 | 3.78 | 2.29 | 1.42 | 1.37 | 1.60 | 1.50 | 1.06 | 2.72 |
| 2000 | 4.43 | 6.03 | 5.55 | 2.80 | 2.29 | 1.50 | 1.79 | 1.55 | 2.12 | 1.59 | 2.68 |
| 2001 | 6.22 | 5.23 | 5.84 | 3.83 | 2.36 | 1.62 | 1.73 | 1.79 | 1.35 | 1.77 | 1.34 |
| 2002 | 1.29 | 3.39 | 5.31 | 3.38 | 1.44 | 1.04 | 1.46 | 1.63 | 1.37 | 1.93 | 2.44 |
| 2003 | 4.06 | 4.55 | 5.38 | 3.57 | 1.47 | 1.12 | 1.29 | 1.12 | 1.54 | 0.71 | 1.77 |
| 2004 | 0.86 | 3.58 | 3.23 | 2.71 | 1.10 | 0.81 | 1.51 | 1.15 | 1.25 | 2.13 | 3.12 |
| 2005 | 3.88 | 3.74 | 4.92 | 3.90 | 1.21 | 0.97 | 1.14 | 1.08 | 0.93 | 0.70 | 1.15 |
| 2006 | 2.83 | 4.19 | 5.68 | 4.63 | 1.53 | 1.22 | 1.41 | 1.54 | 1.31 | 1.39 | 2.37 |
| 2007 | 4.56 | 4.81 | 5.82 | 4.31 | 1.84 | 1.41 | 1.46 | 1.60 | 1.60 | 1.26 | 1.01 |
| 2008 | 4.33 | 5.60 | 4.58 | 2.74 | 1.16 | 0.88 | 1.32 | 1.37 | 0.91 | 0.92 | 1.16 |
| 2009 | 3.49 | 6.71 | 5.79 | 3.45 | 1.57 | 1.18 | 1.50 | 1.44 | 1.78 | 3.07 | 4.49 |
| 2010 | 7.15 | 4.29 | 4.65 | 4.01 | 1.71 | 1.91 | 1.84 | 1.58 | 1.20 | 1.54 | 2.75 |
| 2011 | 3.64 | 6.61 | 8.03 | 6.12 | 2.42 | 1.60 | 1.65 | 1.56 | 2.01 | 1.78 | 1.47 |
| 2012 | 3.37 | 6.49 | 5.47 | 4.49 | 1.73 | 1.06 | 1.35 | 1.19 | 1.27 | 1.16 | 2.51 |
| 2013 | 0.96 | 6.77 | 6.79 | 2.88 | 1.38 | 1.53 | 1.67 | 1.78 | 1.93 | 1.69 | 2.83 |
| 2014 | 3.51 | 3.79 | 5.41 | 3.18 | 1.71 | 1.75 | 1.43 | 1.37 | 1.25 | 0.96 | 1.68 |
| 2015 | 3.94 | 4.51 | 5.27 | 3.47 | 1.91 | 1.02 | 1.64 | 1.48 | 1.59 | 1.20 | 1.22 |
| 2016 | 2.38 | 1.58 | 3.76 | 2.66 | 1.73 | 1.42 | 1.87 | 1.51 | 1.32 | 0.92 | 0.81 |
| 2017 | 0.93 | 2.46 | 4.14 | 1.91 | 1.02 | 1.04 | 1.55 | 1.73 | 1.39 | 1.21 | 1.05 |
| 2018 | 3.13 | 4.54 | 3.12 | 2.52 | 1.18 | 0.85 | 1.04 | 1.59 | 1.86 | 1.54 | 3.61 |
| 2019 | 1.19 | 4.59 | 3.29 | 2.26 | 1.59 | 1.06 | 1.21 | 1.49 | 1.44 | 1.42 | 2.14 |
| 2020 | 1.66 | 4.93 | 3.01 | 2.91 | 1.27 | 1.35 | 1.50 | 1.26 | 1.23 | 1.66 | 3.13 |
| 2021 | 2.84 | 3.70 | 4.55 | 4.62 | 2.30 | 1.76 | 1.85 | 1.47 | 1.04 | 1.52 | 2.78 |
| 2022 | 2.37 | 4.13 | 2.91 | 3.57 | 2.01 | 2.08 | 1.86 | 2.02 | 2.23 | 3.39 | 4.22 |
| 2023 | 6.12 | 2.07 | 4.39 | 2.41 | 1.40 | 1.08 | 1.25 | 1.12 | 1.22 | 1.28 | 2.14 |
| 2024 | 2.99 | 4.99 | 5.78 | 2.39 | 0.90 | 0.64 | 0.94 | 1.21 | 1.34 | 0.72 | 0.24 |
| 2025 | 2.35 | 5.41 | 4.02 | 1.85 | 1.38 | 1.40 | 1.36 | 1.12 | 1.43 | 1.70 | 1.51 |
| 2026 | 4.17 | 5.80 | 5.50 | 3.06 | 1.88 | 1.51 | 1.53 | 1.40 | 1.70 | 1.20 | 1.30 |
| 2027 | 2.60 | 5.61 | 9.23 | 5.03 | 2.35 | 1.47 | 1.38 | 1.64 | 2.02 | 2.33 | 1.86 |
| 2028 | 1.52 | 2.90 | 3.91 | 2.23 | 1.31 | 1.10 | 1.31 | 1.35 | 1.55 | 1.48 | 0.80 |
| 2029 | 1.95 | 1.59 | 2.21 | 1.67 | 0.58 | 1.03 | 1.11 | 1.32 | 1.20 | 1.42 | 3.31 |

6. Tabla de caudales turbinables

| AÑO | CAUDALES TURBINABLES (m³/s) | | | | | | | | | | | |
|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Sep | Oct | Nov | Dic |
| 1965 | 1.14 | 1.50 | 1.50 | 1.50 | 1.23 | 1.10 | 1.44 | 1.37 | 1.50 | 1.35 | 1.24 | 1.50 |
| 1966 | 1.50 | 1.50 | 1.50 | 1.50 | 0.99 | 1.50 | 1.41 | 1.48 | 1.50 | 1.50 | 1.50 | 1.50 |
| 1967 | 1.49 | 1.50 | 1.50 | 1.50 | 1.37 | 0.95 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.30 |
| 1968 | 1.50 | 1.19 | 1.50 | 1.50 | 0.75 | 0.89 | 1.02 | 1.21 | 1.38 | 1.05 | 1.17 | 0.93 |
| 1969 | 0.78 | 1.50 | 1.50 | 1.50 | 1.25 | 0.83 | 1.18 | 1.43 | 1.50 | 1.31 | 1.46 | 1.50 |
| 1970 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.36 | 1.50 | 1.50 | 1.50 | 1.50 | 1.40 | 1.50 |
| 1971 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.36 | 1.43 | 1.50 | 1.50 | 1.31 | 1.02 | 1.50 |
| 1972 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.47 | 1.02 | 1.50 |
| 1973 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.42 | 1.50 | 1.50 | 1.50 | 1.50 |
| 1974 | 1.50 | 1.50 | 1.50 | 1.50 | 0.98 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.15 | 1.27 |
| 1975 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.46 | 1.48 | 1.50 | 1.50 | 1.34 | 1.36 | 1.17 |
| 1976 | 1.50 | 1.50 | 1.50 | 1.50 | 1.10 | 1.32 | 1.45 | 1.50 | 1.50 | 1.21 | 0.91 | 1.50 |
| 1977 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.06 | 1.34 | 1.47 | 1.50 | 1.50 | 1.50 | 1.50 |
| 1978 | 1.50 | 1.50 | 1.50 | 1.50 | 1.16 | 1.09 | 1.18 | 1.39 | 1.49 | 1.50 | 1.08 | 1.50 |
| 1979 | 1.26 | 1.50 | 1.50 | 1.50 | 1.28 | 1.01 | 1.36 | 1.46 | 1.50 | 1.17 | 0.85 | 0.29 |
| 1980 | 1.50 | 1.50 | 1.50 | 1.50 | 1.08 | 1.15 | 1.20 | 1.11 | 1.50 | 1.32 | 1.50 | 1.50 |
| 1981 | 1.50 | 1.50 | 1.50 | 1.50 | 1.31 | 1.40 | 1.50 | 1.37 | 1.50 | 1.50 | 1.50 | 1.50 |
| 1982 | 1.50 | 1.50 | 1.50 | 1.50 | 1.48 | 1.02 | 1.37 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| 1983 | 1.50 | 1.48 | 1.50 | 1.50 | 1.22 | 1.47 | 1.23 | 1.31 | 1.50 | 1.19 | 0.89 | 1.50 |
| 1984 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.44 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| 1985 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.46 | 1.50 | 1.10 | 1.18 | 1.50 |
| 1986 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.40 | 1.20 | 1.50 |
| 1987 | 1.50 | 1.50 | 1.50 | 1.50 | 0.95 | 0.85 | 1.31 | 1.31 | 1.40 | 1.29 | 1.25 | 1.50 |
| 1988 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.45 | 1.39 | 1.24 | 1.43 | 1.27 | 0.77 | 0.87 |
| 1989 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.15 | 1.49 | 1.22 | 1.50 | 1.50 | 1.50 | 1.50 |
| 1990 | 1.50 | 1.50 | 1.50 | 1.29 | 0.49 | 1.42 | 1.04 | 1.22 | 1.50 | 1.40 | 1.50 | 1.50 |
| 1991 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.31 | 1.50 | 1.27 | 1.50 | 1.44 | 1.25 | 0.86 |
| 1992 | 1.50 | 0.91 | 1.50 | 1.50 | 0.87 | 0.74 | 1.08 | 1.22 | 1.26 | 1.39 | 0.81 | 0.57 |
| 1993 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.05 | 1.32 | 1.34 | 1.50 | 1.50 | 1.50 | 1.50 |
| 1994 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.32 | 1.50 | 1.50 |
| 1995 | 1.50 | 1.50 | 1.50 | 1.50 | 1.28 | 1.11 | 1.35 | 1.45 | 1.50 | 1.24 | 1.50 | 1.50 |
| 1996 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.23 | 1.33 | 1.50 | 1.50 | 1.27 | 1.32 | 1.10 |
| 1997 | 1.50 | 1.50 | 1.50 | 1.40 | 1.21 | 1.36 | 1.50 | 1.50 | 1.50 | 1.30 | 1.50 | 1.50 |
| 1998 | 1.50 | 1.50 | 1.50 | 1.50 | 1.31 | 1.07 | 1.41 | 1.36 | 1.50 | 1.37 | 1.24 | 0.88 |
| 1999 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.42 | 1.37 | 1.50 | 1.50 | 1.50 | 1.06 | 1.50 |
| 2000 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| 2001 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.35 | 1.50 | 1.34 |
| 2002 | 1.29 | 1.50 | 1.50 | 1.50 | 1.44 | 1.04 | 1.46 | 1.50 | 1.50 | 1.37 | 1.50 | 1.50 |
| 2003 | 1.50 | 1.50 | 1.50 | 1.50 | 1.47 | 1.12 | 1.29 | 1.12 | 1.48 | 1.50 | 0.71 | 1.50 |
| 2004 | 0.86 | 1.50 | 1.50 | 1.50 | 1.10 | 0.81 | 1.50 | 1.15 | 1.31 | 1.25 | 1.50 | 1.50 |
| 2005 | 1.50 | 1.50 | 1.50 | 1.50 | 1.21 | 0.97 | 1.14 | 1.08 | 1.22 | 0.93 | 0.70 | 1.15 |
| 2006 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.22 | 1.41 | 1.50 | 1.50 | 1.31 | 1.39 | 1.50 |
| 2007 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.41 | 1.46 | 1.50 | 1.50 | 1.50 | 1.26 | 1.01 |
| 2008 | 1.50 | 1.50 | 1.50 | 1.50 | 1.16 | 0.88 | 1.32 | 1.37 | 1.26 | 0.91 | 0.92 | 1.16 |
| 2009 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.18 | 1.50 | 1.44 | 1.50 | 1.50 | 1.50 | 1.50 |
| 2010 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.20 | 1.50 | 1.50 |
| 2011 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.47 |
| 2012 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.06 | 1.35 | 1.19 | 1.44 | 1.27 | 1.16 | 1.50 |
| 2013 | 0.96 | 1.50 | 1.50 | 1.50 | 1.38 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| 2014 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.43 | 1.37 | 1.50 | 1.25 | 0.96 | 1.50 |
| 2015 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.02 | 1.50 | 1.48 | 1.50 | 1.50 | 1.20 | 1.22 |
| 2016 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.42 | 1.50 | 1.50 | 1.50 | 1.32 | 0.92 | 0.81 |
| 2017 | 0.93 | 1.50 | 1.50 | 1.50 | 1.02 | 1.04 | 1.50 | 1.50 | 1.50 | 1.39 | 1.21 | 1.05 |
| 2018 | 1.50 | 1.50 | 1.50 | 1.50 | 1.18 | 0.85 | 1.04 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| 2019 | 1.19 | 1.50 | 1.50 | 1.50 | 1.50 | 1.06 | 1.21 | 1.49 | 1.50 | 1.44 | 1.42 | 1.50 |
| 2020 | 1.50 | 1.50 | 1.50 | 1.50 | 1.27 | 1.35 | 1.50 | 1.26 | 1.50 | 1.23 | 1.50 | 1.50 |
| 2021 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.47 | 1.50 | 1.04 | 1.50 | 1.50 |
| 2022 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| 2023 | 1.50 | 1.50 | 1.50 | 1.50 | 1.40 | 1.08 | 1.25 | 1.12 | 1.31 | 1.22 | 1.28 | 1.50 |
| 2024 | 1.50 | 1.50 | 1.50 | 1.50 | 0.90 | 0.64 | 0.94 | 1.21 | 1.50 | 1.34 | 0.72 | 0.24 |
| 2025 | 1.50 | 1.50 | 1.50 | 1.50 | 1.38 | 1.40 | 1.36 | 1.12 | 1.38 | 1.43 | 1.50 | 1.50 |
| 2026 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.40 | 1.50 | 1.50 | 1.20 | 1.30 |
| 2027 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.47 | 1.38 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| 2028 | 1.50 | 1.50 | 1.50 | 1.50 | 1.31 | 1.10 | 1.31 | 1.35 | 1.50 | 1.50 | 1.48 | 0.80 |
| 2029 | 1.50 | 1.50 | 1.50 | 1.50 | 0.58 | 1.03 | 1.11 | 1.32 | 1.50 | 1.20 | 1.42 | 1.50 |

Los caudales turbinables se obtuvieron bajo la condición: si $Q_{captado} > Q_{diseño}$ entonces el caudal turbinable será el $Q_{diseño}$. En caso contrario será el $Q_{captado}$.

7. Tabla de potencias efectivas

| AÑO | POTENCIAS EFECTIVAS (kW) | | | | | | | | | | | |
|------|--------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Sep | Oct | Nov | Dic |
| 1965 | 4769.64 | 6266.43 | 6266.43 | 6266.43 | 5117.91 | 4610.91 | 6025.70 | 5703.29 | 6266.43 | 5635.57 | 5181.68 | 6266.43 |
| 1966 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 4135.43 | 6266.43 | 5908.23 | 6162.49 | 6266.43 | 6266.43 | 6266.43 | 6266.43 |
| 1967 | 6216.97 | 6266.43 | 6266.43 | 6266.43 | 5715.93 | 3959.49 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5431.68 |
| 1968 | 6266.43 | 4968.82 | 6266.43 | 6266.43 | 3131.61 | 3703.19 | 4242.30 | 5073.23 | 5767.27 | 4375.45 | 4871.98 | 3871.28 |
| 1969 | 3265.78 | 6266.43 | 6266.43 | 6266.43 | 5203.34 | 3446.90 | 4936.43 | 5970.26 | 6266.43 | 5454.03 | 6110.75 | 6266.43 |
| 1970 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5678.82 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5854.45 | 6266.43 |
| 1971 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5689.50 | 5972.30 | 6266.43 | 6266.43 | 5486.07 | 4241.92 | 6266.43 |
| 1972 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6247.92 | 6266.43 | 6126.81 | 4252.60 | 6266.43 |
| 1973 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5948.91 | 6266.43 | 6266.43 | 6266.43 | 6266.43 |
| 1974 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 4092.72 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 4807.91 | 5318.61 |
| 1975 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6116.66 | 6175.20 | 6266.43 | 6266.43 | 5614.22 | 5683.59 | 4877.63 |
| 1976 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 4583.95 | 5529.31 | 6047.05 | 6266.43 | 6266.43 | 5048.23 | 3793.40 | 6266.43 |
| 1977 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 4418.69 | 5577.18 | 6141.13 | 6266.43 | 6266.43 | 6266.43 | 6266.43 |
| 1978 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 4829.57 | 4568.20 | 4915.08 | 5820.76 | 6237.15 | 6266.43 | 4519.57 | 6266.43 |
| 1979 | 5267.16 | 6266.43 | 6266.43 | 6266.43 | 5352.85 | 4226.47 | 5673.29 | 6087.73 | 6266.43 | 4877.36 | 3547.78 | 1191.47 |
| 1980 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 4530.56 | 4792.46 | 5032.55 | 4624.71 | 6266.43 | 5496.75 | 6266.43 | 6266.43 |
| 1981 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5491.67 | 5849.68 | 6266.43 | 5735.33 | 6266.43 | 6266.43 | 6266.43 | 6266.43 |
| 1982 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6164.45 | 4279.86 | 5737.36 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 |
| 1983 | 6266.43 | 6167.38 | 6266.43 | 6266.43 | 5096.55 | 6127.34 | 5117.98 | 5489.71 | 6266.43 | 4973.47 | 3707.97 | 6266.43 |
| 1984 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6015.02 | 6258.60 | 6266.43 | 6266.43 | 6266.43 | 6266.43 |
| 1985 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6087.73 | 6266.43 | 4610.39 | 4925.38 | 6266.43 |
| 1986 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5859.83 | 5032.17 | 6266.43 |
| 1987 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 3953.89 | 3532.33 | 5470.39 | 5479.03 | 5842.02 | 5379.28 | 5213.71 | 6266.43 |
| 1988 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6063.26 | 5822.80 | 5190.70 | 5959.49 | 5315.20 | 3216.73 | 3633.83 |
| 1989 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 4803.14 | 6207.24 | 5105.26 | 6266.43 | 6266.43 | 6266.43 | 6266.43 |
| 1990 | 6266.43 | 6266.43 | 6266.43 | 5396.05 | 2063.70 | 5924.43 | 4327.73 | 5105.26 | 6266.43 | 5849.16 | 6266.43 | 6266.43 |
| 1991 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5486.59 | 6266.43 | 5286.81 | 6266.43 | 5998.66 | 5213.71 | 3577.30 |
| 1992 | 6266.43 | 3792.87 | 6266.43 | 6266.43 | 3654.88 | 3094.49 | 4519.95 | 5115.94 | 5276.03 | 5795.76 | 3398.28 | 2390.04 |
| 1993 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 4375.97 | 5502.42 | 5617.86 | 6266.43 | 6266.43 | 6266.43 | 6266.43 |
| 1994 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5528.78 | 6266.43 | 6266.43 |
| 1995 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5363.52 | 4653.63 | 5619.89 | 6055.70 | 6266.43 | 5197.73 | 6266.43 | 6266.43 |
| 1996 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5134.19 | 5555.82 | 6266.43 | 6266.43 | 5325.88 | 5502.05 | 4606.25 |
| 1997 | 6266.43 | 6266.43 | 6266.43 | 5837.03 | 5043.15 | 5668.14 | 6266.43 | 6266.43 | 6266.43 | 5421.99 | 6266.43 | 6266.43 |
| 1998 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5480.99 | 4482.76 | 5886.87 | 5681.93 | 6266.43 | 5710.33 | 5192.35 | 3690.37 |
| 1999 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5935.11 | 5705.33 | 6266.43 | 6266.43 | 6266.43 | 4423.46 | 6266.43 |
| 2000 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6255.49 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 |
| 2001 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5624.90 | 6266.43 | 5589.98 |
| 2002 | 5391.54 | 6266.43 | 6266.43 | 6266.43 | 6036.30 | 4343.94 | 6079.09 | 6266.43 | 6266.43 | 5731.69 | 6266.43 | 6266.43 |
| 2003 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6153.77 | 4674.99 | 5384.95 | 4699.46 | 6173.07 | 6266.43 | 2981.79 | 6266.43 |
| 2004 | 3593.69 | 6266.43 | 6266.43 | 6266.43 | 4594.63 | 3372.14 | 6266.43 | 4784.89 | 5457.58 | 5240.45 | 6266.43 | 6266.43 |
| 2005 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5043.15 | 4034.25 | 4744.21 | 4528.59 | 5083.81 | 3873.53 | 2907.04 | 4809.78 |
| 2006 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5112.83 | 5876.19 | 6266.43 | 6266.43 | 5486.07 | 5811.74 | 6266.43 |
| 2007 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5871.04 | 6100.45 | 6266.43 | 6266.43 | 6266.43 | 5277.79 | 4221.81 |
| 2008 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 4861.61 | 3660.48 | 5523.78 | 5703.29 | 5244.00 | 3809.46 | 3825.44 | 4843.70 |
| 2009 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 4931.28 | 6266.43 | 6002.30 | 6266.43 | 6266.43 | 6266.43 | 6266.43 |
| 2010 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5016.19 | 6266.43 | 6266.43 |
| 2011 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6144.03 |
| 2012 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 4429.37 | 5619.89 | 4955.76 | 6002.21 | 5325.88 | 4839.95 | 6266.43 |
| 2013 | 4012.06 | 6266.43 | 6266.43 | 6266.43 | 5758.65 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 |
| 2014 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5993.66 | 5735.33 | 6266.43 | 5219.09 | 3996.30 | 6266.43 |
| 2015 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 4258.50 | 6266.43 | 6183.85 | 6266.43 | 6266.43 | 5032.17 | 5103.77 |
| 2016 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5913.76 | 6266.43 | 6266.43 | 6266.43 | 5507.43 | 3836.12 | 3396.38 |
| 2017 | 3876.37 | 6266.43 | 6266.43 | 6266.43 | 4242.23 | 4333.26 | 6266.43 | 6266.43 | 6266.43 | 5817.12 | 5042.85 | 4368.80 |
| 2018 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 4936.36 | 3532.33 | 4359.77 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 |
| 2019 | 4961.87 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 4440.05 | 5053.90 | 6205.20 | 6266.43 | 6030.70 | 5950.57 | 6266.43 |
| 2020 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5288.77 | 5636.10 | 6266.43 | 5276.13 | 6266.43 | 5155.02 | 6266.43 | 6266.43 |
| 2021 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6141.13 | 6266.43 | 4343.41 | 6266.43 | 6266.43 |
| 2022 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 |
| 2023 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5854.76 | 4525.48 | 5203.41 | 4699.46 | 5468.26 | 5112.30 | 5341.86 | 6266.43 |
| 2024 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 3740.31 | 2667.33 | 3943.28 | 5073.23 | 6266.43 | 5592.86 | 2992.47 | 1021.86 |
| 2025 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5747.97 | 5828.32 | 5673.29 | 4688.78 | 5745.91 | 5987.98 | 6266.43 | 6266.43 |
| 2026 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5863.47 | 6266.43 | 6266.43 | 5000.13 | 5420.37 |
| 2027 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6159.37 | 5769.40 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 6266.43 |
| 2028 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 5480.99 | 4610.91 | 5481.07 | 5649.89 | 6266.43 | 6266.43 | 6164.15 | 3339.84 |
| 2029 | 6266.43 | 6266.43 | 6266.43 | 6266.43 | 2426.79 | 4311.90 | 4626.74 | 5500.39 | 6266.43 | 4994.83 | 5950.57 | 6266.43 |

8. Tabla de energía producida

| AÑO | ENERGÍA (kWh) | | | | | | | | | | | |
|------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Sep | Oct | Nov | Dic |
| 1965 | 3,548,616 | 4,211,040 | 4,662,223 | 4,511,829 | 3,807,722 | 3,319,857 | 4,483,118 | 4,243,247 | 4,511,829 | 4,192,868 | 3,730,806 | 4,662,223 |
| 1966 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 3,076,764 | 4,511,829 | 4,395,721 | 4,584,891 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 |
| 1967 | 4,625,425 | 4,211,040 | 4,662,223 | 4,511,829 | 4,252,654 | 2,850,834 | 4,662,223 | 4,662,223 | 4,511,829 | 4,662,223 | 4,511,829 | 4,041,169 |
| 1968 | 4,662,223 | 3,339,047 | 4,662,223 | 4,511,829 | 2,329,914 | 2,666,300 | 3,156,269 | 3,774,480 | 4,152,433 | 3,255,333 | 3,507,828 | 2,880,234 |
| 1969 | 2,429,744 | 4,211,040 | 4,662,223 | 4,511,829 | 3,871,284 | 2,481,767 | 3,672,708 | 4,441,877 | 4,511,829 | 4,057,799 | 4,399,741 | 4,662,223 |
| 1970 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 4,088,748 | 4,662,223 | 4,662,223 | 4,511,829 | 4,662,223 | 4,215,207 | 4,662,223 |
| 1971 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 4,096,437 | 4,443,392 | 4,662,223 | 4,511,829 | 4,081,635 | 3,054,182 | 4,662,223 |
| 1972 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 | 4,648,452 | 4,511,829 | 4,558,347 | 3,061,871 | 4,662,223 |
| 1973 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 | 4,425,987 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 |
| 1974 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 3,044,983 | 4,511,829 | 4,662,223 | 4,662,223 | 4,511,829 | 4,662,223 | 3,461,694 | 3,957,043 |
| 1975 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 4,403,993 | 4,594,351 | 4,662,223 | 4,511,829 | 4,176,977 | 4,092,185 | 3,628,953 |
| 1976 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 3,410,462 | 3,981,104 | 4,499,009 | 4,662,223 | 4,511,829 | 3,755,881 | 2,731,248 | 4,662,223 |
| 1977 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 3,181,457 | 4,149,420 | 4,569,000 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 |
| 1978 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 3,593,202 | 3,289,102 | 3,656,817 | 4,330,644 | 4,490,745 | 4,662,223 | 3,254,094 | 4,662,223 |
| 1979 | 3,918,769 | 4,211,040 | 4,662,223 | 4,511,829 | 3,982,517 | 3,043,057 | 4,220,927 | 4,529,274 | 4,511,829 | 3,628,758 | 2,554,403 | 886,455 |
| 1980 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 3,370,736 | 3,450,569 | 3,744,214 | 3,440,781 | 4,511,829 | 4,089,580 | 4,511,829 | 4,662,223 |
| 1981 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,085,805 | 4,211,771 | 4,662,223 | 4,267,083 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 |
| 1982 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,586,352 | 3,081,501 | 4,268,598 | 4,662,223 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 |
| 1983 | 4,662,223 | 4,144,482 | 4,662,223 | 4,511,829 | 3,791,832 | 4,411,682 | 3,807,776 | 4,084,343 | 4,511,829 | 3,700,265 | 2,669,737 | 4,662,223 |
| 1984 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 4,511,829 | 4,475,173 | 4,656,398 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 |
| 1985 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 | 4,529,274 | 4,511,829 | 3,430,128 | 3,546,272 | 4,662,223 |
| 1986 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 | 4,662,223 | 4,511,829 | 4,359,717 | 3,623,162 | 4,662,223 |
| 1987 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 2,941,695 | 2,543,278 | 4,069,968 | 4,076,398 | 4,206,255 | 4,002,183 | 3,753,873 | 4,662,223 |
| 1988 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 4,365,549 | 4,332,159 | 3,861,877 | 4,290,833 | 3,954,511 | 2,316,047 | 2,703,570 |
| 1989 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 3,458,258 | 4,618,187 | 3,798,315 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 |
| 1990 | 4,662,223 | 4,211,040 | 4,662,223 | 3,885,155 | 1,535,394 | 4,265,593 | 3,219,831 | 3,798,315 | 4,511,829 | 4,351,772 | 4,511,829 | 4,662,223 |
| 1991 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 3,950,348 | 4,662,223 | 3,933,384 | 4,511,829 | 4,463,005 | 3,753,873 | 2,661,508 |
| 1992 | 4,662,223 | 2,548,808 | 4,662,223 | 4,511,829 | 2,719,229 | 2,228,033 | 3,362,845 | 3,806,261 | 3,798,743 | 4,312,046 | 2,446,759 | 1,778,188 |
| 1993 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 3,150,702 | 4,093,803 | 4,179,685 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 |
| 1994 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 | 4,662,223 | 4,511,829 | 4,113,416 | 4,511,829 | 4,662,223 |
| 1995 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 3,990,462 | 3,350,613 | 4,181,201 | 4,505,439 | 4,511,829 | 3,867,114 | 4,511,829 | 4,662,223 |
| 1996 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 3,696,614 | 4,133,529 | 4,662,223 | 4,511,829 | 3,962,457 | 3,961,473 | 3,427,051 |
| 1997 | 4,662,223 | 4,211,040 | 4,662,223 | 4,202,662 | 3,752,106 | 4,081,059 | 4,662,223 | 4,662,223 | 4,511,829 | 4,033,963 | 4,511,829 | 4,662,223 |
| 1998 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,077,859 | 3,227,591 | 4,379,831 | 4,227,357 | 4,511,829 | 4,248,484 | 3,738,495 | 2,745,633 |
| 1999 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 4,273,282 | 4,244,762 | 4,662,223 | 4,511,829 | 4,662,223 | 3,184,894 | 4,662,223 |
| 2000 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 4,503,949 | 4,662,223 | 4,662,223 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 |
| 2001 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 | 4,662,223 | 4,511,829 | 4,184,922 | 4,511,829 | 4,158,945 |
| 2002 | 4,011,307 | 4,211,040 | 4,662,223 | 4,511,829 | 4,491,010 | 3,127,635 | 4,522,844 | 4,662,223 | 4,511,829 | 4,264,374 | 4,511,829 | 4,662,223 |
| 2003 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,578,407 | 3,365,991 | 4,006,406 | 3,496,398 | 4,444,612 | 4,662,223 | 2,146,891 | 4,662,223 |
| 2004 | 2,673,708 | 4,211,040 | 4,662,223 | 4,511,829 | 3,418,407 | 2,427,944 | 4,662,223 | 3,559,959 | 3,929,455 | 3,898,895 | 4,511,829 | 4,662,223 |
| 2005 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 3,752,106 | 2,904,656 | 3,529,694 | 3,369,274 | 3,660,343 | 2,881,909 | 2,093,069 | 3,578,478 |
| 2006 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 3,681,236 | 4,371,886 | 4,662,223 | 4,511,829 | 4,081,635 | 4,184,452 | 4,662,223 |
| 2007 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,227,149 | 4,538,735 | 4,662,223 | 4,662,223 | 4,511,829 | 4,662,223 | 3,800,006 | 3,141,024 |
| 2008 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 3,617,038 | 2,635,545 | 4,109,694 | 4,243,247 | 3,775,677 | 2,834,238 | 2,754,315 | 3,603,715 |
| 2009 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 3,550,525 | 4,662,223 | 4,465,713 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 |
| 2010 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 | 4,662,223 | 4,511,829 | 3,732,046 | 4,511,829 | 4,662,223 |
| 2011 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 | 4,662,223 | 4,511,829 | 4,662,223 | 4,511,829 | 4,571,161 |
| 2012 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 3,189,146 | 4,181,201 | 3,687,083 | 4,321,589 | 3,962,457 | 3,484,761 | 4,662,223 |
| 2013 | 2,984,974 | 4,211,040 | 4,662,223 | 4,511,829 | 4,284,435 | 4,511,829 | 4,662,223 | 4,662,223 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 |
| 2014 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 4,511,829 | 4,459,283 | 4,267,083 | 4,511,829 | 3,883,005 | 2,877,338 | 4,662,223 |
| 2015 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 3,066,124 | 4,662,223 | 4,600,781 | 4,511,829 | 4,662,223 | 3,623,162 | 3,797,205 |
| 2016 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 4,257,904 | 4,662,223 | 4,662,223 | 4,511,829 | 4,097,525 | 2,762,004 | 2,526,907 |
| 2017 | 2,884,023 | 4,211,040 | 4,662,223 | 4,511,829 | 3,156,216 | 3,119,946 | 4,662,223 | 4,662,223 | 4,511,829 | 4,327,936 | 3,630,850 | 3,250,388 |
| 2018 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 3,672,654 | 2,543,278 | 3,243,666 | 4,662,223 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 |
| 2019 | 3,691,629 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 3,196,835 | 3,760,105 | 4,616,672 | 4,511,829 | 4,486,840 | 4,284,408 | 4,662,223 |
| 2020 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 3,934,846 | 4,057,993 | 4,662,223 | 3,925,439 | 4,511,829 | 3,835,333 | 4,511,829 | 4,662,223 |
| 2021 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 | 4,569,000 | 4,511,829 | 3,231,498 | 4,511,829 | 4,662,223 |
| 2022 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 | 4,662,223 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 |
| 2023 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,355,942 | 3,258,346 | 3,871,338 | 3,496,398 | 3,937,144 | 3,803,553 | 3,846,140 | 4,662,223 |
| 2024 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 2,782,791 | 1,920,476 | 2,933,804 | 3,774,480 | 4,511,829 | 4,161,087 | 2,154,580 | 760,267 |
| 2025 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,276,489 | 4,196,393 | 4,220,927 | 3,488,452 | 4,137,055 | 4,455,059 | 4,511,829 | 4,662,223 |
| 2026 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 | 4,362,425 | 4,511,829 | 4,662,223 | 3,600,095 | 4,032,756 |
| 2027 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,662,223 | 4,434,749 | 4,292,433 | 4,662,223 | 4,511,829 | 4,662,223 | 4,511,829 | 4,662,223 |
| 2028 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 4,077,859 | 3,319,857 | 4,077,913 | 4,203,521 | 4,511,829 | 4,662,223 | 4,438,186 | 2,484,844 |
| 2029 | 4,662,223 | 4,211,040 | 4,662,223 | 4,511,829 | 1,805,531 | 3,104,568 | 3,442,297 | 4,092,288 | 4,511,829 | 3,716,155 | 4,284,408 | 4,662,223 |

Factor de planta = 0.94

Cálculo del factor de planta $Q=1.47\text{m}^3/\text{s}$

1. Parámetros de entrada

| Parámetros de entrada | |
|------------------------------------|-------|
| Caudal (m ³ /s) | 1.47 |
| Longitud de Canal (m) | 7400 |
| Longitud de la tubería Forzada (m) | 735 |
| Pendiente del canal (m) | 0.001 |
| Diámetro de la tubería forzada (m) | 0.59 |

2. Cálculo de pérdidas de energía en la tubería forzada

| En la tubería forzada | |
|-------------------------------------|------------|
| Área del conducto (m ²) | 0.27 |
| Velocidad (m/s) | 5.38 |
| Re | 3172308.70 |
| f | 0.01 |
| Pérdida en el túnel (m) | 22.62 |

3. Cálculo de pérdidas de energía en el canal

| | |
|---------------------|---------------|
| En el canal | EC. Bernoulli |
| Pérdida en el canal | 7.400 |

4. Pérdida total, altura neta y potencia generada

| | |
|------------------------|--------|
| Pérdida total (m) | 30.02 |
| Altura neta (m) | 499.98 |
| Potencia generada (kW) | 6128.6 |

5. Tabla de caudales captados considerando el caudal ecológico

| AÑO | CAUDALES CONSIDERANDO EL CAUDAL ECOLÓGICO (m³/s) | | | | | | | | | | |
|------|--|------|------|------|------|------|------|------|------|------|------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Oct | Nov | Dic |
| 1965 | 1.14 | 4.10 | 3.81 | 1.67 | 1.23 | 1.10 | 1.44 | 1.37 | 1.35 | 1.24 | 1.51 |
| 1966 | 4.01 | 3.19 | 3.71 | 2.43 | 0.99 | 1.53 | 1.41 | 1.48 | 1.81 | 1.63 | 1.76 |
| 1967 | 1.49 | 7.76 | 7.21 | 2.42 | 1.37 | 0.95 | 1.63 | 1.92 | 2.31 | 1.78 | 1.30 |
| 1968 | 1.55 | 1.19 | 2.46 | 1.80 | 0.75 | 0.89 | 1.02 | 1.21 | 1.05 | 1.17 | 0.93 |
| 1969 | 0.78 | 2.36 | 3.14 | 3.13 | 1.25 | 0.83 | 1.18 | 1.43 | 1.31 | 1.46 | 4.15 |
| 1970 | 6.02 | 3.09 | 3.20 | 2.97 | 2.00 | 1.36 | 1.53 | 1.54 | 1.99 | 1.40 | 2.72 |
| 1971 | 3.67 | 4.90 | 7.02 | 3.94 | 1.79 | 1.36 | 1.43 | 1.66 | 1.31 | 1.02 | 1.83 |
| 1972 | 4.83 | 4.12 | 8.48 | 5.07 | 1.90 | 1.60 | 1.64 | 1.50 | 1.47 | 1.02 | 2.41 |
| 1973 | 5.27 | 7.28 | 7.00 | 5.56 | 2.04 | 1.54 | 1.66 | 1.42 | 1.83 | 1.90 | 3.40 |
| 1974 | 3.95 | 4.49 | 5.59 | 2.69 | 0.98 | 1.52 | 1.57 | 1.67 | 1.69 | 1.15 | 1.27 |
| 1975 | 2.27 | 2.46 | 6.61 | 2.86 | 1.74 | 1.46 | 1.48 | 1.58 | 1.34 | 1.36 | 1.17 |
| 1976 | 2.74 | 4.80 | 4.44 | 2.56 | 1.10 | 1.32 | 1.45 | 1.56 | 1.21 | 0.91 | 1.77 |
| 1977 | 1.65 | 6.12 | 3.89 | 2.34 | 1.64 | 1.06 | 1.34 | 1.47 | 1.56 | 2.19 | 1.91 |
| 1978 | 2.11 | 4.77 | 2.88 | 1.82 | 1.16 | 1.09 | 1.18 | 1.39 | 1.56 | 1.08 | 1.65 |
| 1979 | 1.26 | 4.64 | 6.15 | 3.04 | 1.28 | 1.01 | 1.36 | 1.46 | 1.17 | 0.85 | 0.29 |
| 1980 | 2.27 | 2.00 | 3.73 | 2.57 | 1.08 | 1.15 | 1.20 | 1.11 | 1.32 | 1.96 | 2.01 |
| 1981 | 2.70 | 7.45 | 6.07 | 2.68 | 1.31 | 1.40 | 1.62 | 1.37 | 1.79 | 1.90 | 2.52 |
| 1982 | 2.29 | 7.79 | 3.39 | 1.80 | 1.48 | 1.02 | 1.37 | 2.09 | 1.68 | 2.09 | 1.56 |
| 1983 | 2.39 | 1.48 | 3.77 | 3.75 | 1.22 | 1.47 | 1.23 | 1.31 | 1.19 | 0.89 | 1.79 |
| 1984 | 2.52 | 8.75 | 6.87 | 4.19 | 2.02 | 1.62 | 1.44 | 1.50 | 1.91 | 1.60 | 3.45 |
| 1985 | 2.06 | 3.63 | 5.04 | 3.95 | 1.78 | 1.60 | 1.73 | 1.46 | 1.10 | 1.18 | 2.24 |
| 1986 | 4.60 | 5.11 | 6.85 | 5.15 | 2.35 | 1.83 | 1.68 | 1.53 | 1.40 | 1.20 | 1.71 |
| 1987 | 4.75 | 4.86 | 3.17 | 1.67 | 0.95 | 0.85 | 1.31 | 1.31 | 1.29 | 1.25 | 2.30 |
| 1988 | 3.87 | 5.54 | 3.43 | 4.01 | 1.73 | 1.45 | 1.39 | 1.24 | 1.27 | 0.77 | 0.87 |
| 1989 | 4.13 | 6.43 | 6.05 | 4.11 | 1.80 | 1.15 | 1.49 | 1.22 | 1.59 | 1.56 | 1.88 |
| 1990 | 2.64 | 1.58 | 1.88 | 1.29 | 0.49 | 1.42 | 1.04 | 1.22 | 1.40 | 2.86 | 2.34 |
| 1991 | 2.09 | 2.64 | 5.23 | 2.42 | 1.80 | 1.31 | 1.53 | 1.27 | 1.44 | 1.25 | 0.86 |
| 1992 | 1.56 | 0.91 | 2.48 | 1.77 | 0.87 | 0.74 | 1.08 | 1.22 | 1.39 | 0.81 | 0.57 |
| 1993 | 2.13 | 4.18 | 5.11 | 3.48 | 1.85 | 1.05 | 1.32 | 1.34 | 1.65 | 2.95 | 4.17 |
| 1994 | 4.88 | 5.44 | 5.37 | 5.33 | 2.63 | 2.00 | 1.66 | 1.55 | 1.32 | 1.58 | 1.70 |
| 1995 | 2.64 | 2.30 | 3.77 | 3.54 | 1.28 | 1.11 | 1.35 | 1.45 | 1.24 | 1.62 | 2.10 |
| 1996 | 3.72 | 5.75 | 5.17 | 3.71 | 1.60 | 1.23 | 1.33 | 1.57 | 1.27 | 1.32 | 1.10 |
| 1997 | 2.25 | 4.51 | 2.97 | 1.40 | 1.21 | 1.36 | 1.70 | 1.73 | 1.30 | 1.68 | 2.71 |
| 1998 | 4.95 | 5.20 | 4.88 | 2.78 | 1.31 | 1.07 | 1.41 | 1.36 | 1.37 | 1.24 | 0.88 |
| 1999 | 1.58 | 4.98 | 4.84 | 3.78 | 2.29 | 1.42 | 1.37 | 1.60 | 1.50 | 1.06 | 2.72 |
| 2000 | 4.43 | 6.03 | 5.55 | 2.80 | 2.29 | 1.50 | 1.79 | 1.55 | 2.12 | 1.59 | 2.68 |
| 2001 | 6.22 | 5.23 | 5.84 | 3.83 | 2.36 | 1.62 | 1.73 | 1.79 | 1.35 | 1.77 | 1.34 |
| 2002 | 1.29 | 3.39 | 5.31 | 3.38 | 1.44 | 1.04 | 1.46 | 1.63 | 1.37 | 1.93 | 2.44 |
| 2003 | 4.06 | 4.55 | 5.38 | 3.57 | 1.47 | 1.12 | 1.29 | 1.12 | 1.54 | 0.71 | 1.77 |
| 2004 | 0.86 | 3.58 | 3.23 | 2.71 | 1.10 | 0.81 | 1.51 | 1.15 | 1.25 | 2.13 | 3.12 |
| 2005 | 3.88 | 3.74 | 4.92 | 3.90 | 1.21 | 0.97 | 1.14 | 1.08 | 0.93 | 0.70 | 1.15 |
| 2006 | 2.83 | 4.19 | 5.68 | 4.63 | 1.53 | 1.22 | 1.41 | 1.54 | 1.31 | 1.39 | 2.37 |
| 2007 | 4.56 | 4.81 | 5.82 | 4.31 | 1.84 | 1.41 | 1.46 | 1.60 | 1.60 | 1.26 | 1.01 |
| 2008 | 4.33 | 5.60 | 4.58 | 2.74 | 1.16 | 0.88 | 1.32 | 1.37 | 0.91 | 0.92 | 1.16 |
| 2009 | 3.49 | 6.71 | 5.79 | 3.45 | 1.57 | 1.18 | 1.50 | 1.44 | 1.78 | 3.07 | 4.49 |
| 2010 | 7.15 | 4.29 | 4.65 | 4.01 | 1.71 | 1.91 | 1.84 | 1.58 | 1.20 | 1.54 | 2.75 |
| 2011 | 3.64 | 6.61 | 8.03 | 6.12 | 2.42 | 1.60 | 1.65 | 1.56 | 2.01 | 1.78 | 1.47 |
| 2012 | 3.37 | 6.49 | 5.47 | 4.49 | 1.73 | 1.06 | 1.35 | 1.19 | 1.27 | 1.16 | 2.51 |
| 2013 | 0.96 | 6.77 | 6.79 | 2.88 | 1.38 | 1.53 | 1.67 | 1.78 | 1.93 | 1.69 | 2.83 |
| 2014 | 3.51 | 3.79 | 5.41 | 3.18 | 1.71 | 1.75 | 1.43 | 1.37 | 1.25 | 0.96 | 1.68 |
| 2015 | 3.94 | 4.51 | 5.27 | 3.47 | 1.91 | 1.02 | 1.64 | 1.48 | 1.59 | 1.20 | 1.22 |
| 2016 | 2.38 | 1.58 | 3.76 | 2.66 | 1.73 | 1.42 | 1.87 | 1.51 | 1.32 | 0.92 | 0.81 |
| 2017 | 0.93 | 2.46 | 4.14 | 1.91 | 1.02 | 1.04 | 1.55 | 1.73 | 1.39 | 1.21 | 1.05 |
| 2018 | 3.13 | 4.54 | 3.12 | 2.52 | 1.18 | 0.85 | 1.04 | 1.59 | 1.86 | 1.54 | 3.61 |
| 2019 | 1.19 | 4.59 | 3.29 | 2.26 | 1.59 | 1.06 | 1.21 | 1.49 | 1.44 | 1.42 | 2.14 |
| 2020 | 1.66 | 4.93 | 3.01 | 2.91 | 1.27 | 1.35 | 1.50 | 1.26 | 1.23 | 1.66 | 3.13 |
| 2021 | 2.84 | 3.70 | 4.55 | 4.62 | 2.30 | 1.76 | 1.85 | 1.47 | 1.04 | 1.52 | 2.78 |
| 2022 | 2.37 | 4.13 | 2.91 | 3.57 | 2.01 | 2.08 | 1.86 | 2.02 | 2.23 | 3.39 | 4.22 |
| 2023 | 6.12 | 2.07 | 4.39 | 2.41 | 1.40 | 1.08 | 1.25 | 1.12 | 1.22 | 1.28 | 2.14 |
| 2024 | 2.99 | 4.99 | 5.78 | 2.39 | 0.90 | 0.64 | 0.94 | 1.21 | 1.34 | 0.72 | 0.24 |
| 2025 | 2.35 | 5.41 | 4.02 | 1.85 | 1.38 | 1.40 | 1.36 | 1.12 | 1.43 | 1.70 | 1.51 |
| 2026 | 4.17 | 5.80 | 5.50 | 3.06 | 1.88 | 1.51 | 1.53 | 1.40 | 1.70 | 1.20 | 1.30 |
| 2027 | 2.60 | 5.61 | 9.23 | 5.03 | 2.35 | 1.47 | 1.38 | 1.64 | 2.02 | 2.33 | 1.86 |
| 2028 | 1.52 | 2.90 | 3.91 | 2.23 | 1.31 | 1.10 | 1.31 | 1.35 | 1.55 | 1.48 | 0.80 |
| 2029 | 1.95 | 1.59 | 2.21 | 1.67 | 0.58 | 1.03 | 1.11 | 1.32 | 1.20 | 1.42 | 3.31 |

6. Tabla de caudales turbinables

| AÑO | CAUDALES TURBINABLES (m³/s) | | | | | | | | | | | |
|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Sep | Oct | Nov | Dic |
| 1965 | 1.14 | 1.47 | 1.47 | 1.47 | 1.23 | 1.10 | 1.44 | 1.37 | 1.47 | 1.35 | 1.24 | 1.47 |
| 1966 | 1.47 | 1.47 | 1.47 | 1.47 | 0.99 | 1.47 | 1.41 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 |
| 1967 | 1.47 | 1.47 | 1.47 | 1.47 | 1.37 | 0.95 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.30 |
| 1968 | 1.47 | 1.19 | 1.47 | 1.47 | 0.75 | 0.89 | 1.02 | 1.21 | 1.38 | 1.05 | 1.17 | 0.93 |
| 1969 | 0.78 | 1.47 | 1.47 | 1.47 | 1.25 | 0.83 | 1.18 | 1.43 | 1.47 | 1.31 | 1.46 | 1.47 |
| 1970 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.36 | 1.47 | 1.47 | 1.47 | 1.47 | 1.40 | 1.47 |
| 1971 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.36 | 1.43 | 1.47 | 1.47 | 1.31 | 1.02 | 1.47 |
| 1972 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.02 | 1.47 |
| 1973 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.42 | 1.47 | 1.47 | 1.47 | 1.47 |
| 1974 | 1.47 | 1.47 | 1.47 | 1.47 | 0.98 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.15 | 1.27 |
| 1975 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.46 | 1.47 | 1.47 | 1.47 | 1.34 | 1.36 | 1.17 |
| 1976 | 1.47 | 1.47 | 1.47 | 1.47 | 1.10 | 1.32 | 1.45 | 1.47 | 1.47 | 1.21 | 0.91 | 1.47 |
| 1977 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.06 | 1.34 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 |
| 1978 | 1.47 | 1.47 | 1.47 | 1.47 | 1.16 | 1.09 | 1.18 | 1.39 | 1.47 | 1.47 | 1.08 | 1.47 |
| 1979 | 1.26 | 1.47 | 1.47 | 1.47 | 1.28 | 1.01 | 1.36 | 1.46 | 1.47 | 1.17 | 0.85 | 0.29 |
| 1980 | 1.47 | 1.47 | 1.47 | 1.47 | 1.08 | 1.15 | 1.20 | 1.11 | 1.47 | 1.32 | 1.47 | 1.47 |
| 1981 | 1.47 | 1.47 | 1.47 | 1.47 | 1.31 | 1.40 | 1.47 | 1.37 | 1.47 | 1.47 | 1.47 | 1.47 |
| 1982 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.02 | 1.37 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 |
| 1983 | 1.47 | 1.47 | 1.47 | 1.47 | 1.22 | 1.47 | 1.23 | 1.31 | 1.47 | 1.19 | 0.89 | 1.47 |
| 1984 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.44 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 |
| 1985 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.46 | 1.47 | 1.10 | 1.18 | 1.47 |
| 1986 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.40 | 1.20 | 1.47 |
| 1987 | 1.47 | 1.47 | 1.47 | 1.47 | 0.95 | 0.85 | 1.31 | 1.31 | 1.40 | 1.29 | 1.25 | 1.47 |
| 1988 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.45 | 1.39 | 1.24 | 1.43 | 1.27 | 0.77 | 0.87 |
| 1989 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.15 | 1.47 | 1.22 | 1.47 | 1.47 | 1.47 | 1.47 |
| 1990 | 1.47 | 1.47 | 1.47 | 1.29 | 0.49 | 1.42 | 1.04 | 1.22 | 1.47 | 1.40 | 1.47 | 1.47 |
| 1991 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.31 | 1.47 | 1.27 | 1.47 | 1.44 | 1.25 | 0.86 |
| 1992 | 1.47 | 0.91 | 1.47 | 1.47 | 0.87 | 0.74 | 1.08 | 1.22 | 1.26 | 1.39 | 0.81 | 0.57 |
| 1993 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.05 | 1.32 | 1.34 | 1.47 | 1.47 | 1.47 | 1.47 |
| 1994 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.32 | 1.47 | 1.47 |
| 1995 | 1.47 | 1.47 | 1.47 | 1.47 | 1.28 | 1.11 | 1.35 | 1.45 | 1.47 | 1.24 | 1.47 | 1.47 |
| 1996 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.23 | 1.33 | 1.47 | 1.47 | 1.27 | 1.32 | 1.10 |
| 1997 | 1.47 | 1.47 | 1.47 | 1.40 | 1.21 | 1.36 | 1.47 | 1.47 | 1.47 | 1.30 | 1.47 | 1.47 |
| 1998 | 1.47 | 1.47 | 1.47 | 1.47 | 1.31 | 1.07 | 1.41 | 1.36 | 1.47 | 1.37 | 1.24 | 0.88 |
| 1999 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.42 | 1.37 | 1.47 | 1.47 | 1.47 | 1.06 | 1.47 |
| 2000 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 |
| 2001 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.35 | 1.47 | 1.34 |
| 2002 | 1.29 | 1.47 | 1.47 | 1.47 | 1.44 | 1.04 | 1.46 | 1.47 | 1.47 | 1.37 | 1.47 | 1.47 |
| 2003 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.12 | 1.29 | 1.12 | 1.47 | 1.47 | 0.71 | 1.47 |
| 2004 | 0.86 | 1.47 | 1.47 | 1.47 | 1.10 | 0.81 | 1.47 | 1.15 | 1.31 | 1.25 | 1.47 | 1.47 |
| 2005 | 1.47 | 1.47 | 1.47 | 1.47 | 1.21 | 0.97 | 1.14 | 1.08 | 1.22 | 0.93 | 0.70 | 1.15 |
| 2006 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.22 | 1.41 | 1.47 | 1.47 | 1.31 | 1.39 | 1.47 |
| 2007 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.41 | 1.46 | 1.47 | 1.47 | 1.47 | 1.26 | 1.01 |
| 2008 | 1.47 | 1.47 | 1.47 | 1.47 | 1.16 | 0.88 | 1.32 | 1.37 | 1.26 | 0.91 | 0.92 | 1.16 |
| 2009 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.18 | 1.47 | 1.44 | 1.47 | 1.47 | 1.47 | 1.47 |
| 2010 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.20 | 1.47 | 1.47 |
| 2011 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 |
| 2012 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.06 | 1.35 | 1.19 | 1.44 | 1.27 | 1.16 | 1.47 |
| 2013 | 0.96 | 1.47 | 1.47 | 1.47 | 1.38 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 |
| 2014 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.43 | 1.37 | 1.47 | 1.25 | 0.96 | 1.47 |
| 2015 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.02 | 1.47 | 1.47 | 1.47 | 1.47 | 1.20 | 1.22 |
| 2016 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.42 | 1.47 | 1.47 | 1.47 | 1.32 | 0.92 | 0.81 |
| 2017 | 0.93 | 1.47 | 1.47 | 1.47 | 1.02 | 1.04 | 1.47 | 1.47 | 1.47 | 1.39 | 1.21 | 1.05 |
| 2018 | 1.47 | 1.47 | 1.47 | 1.47 | 1.18 | 0.85 | 1.04 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 |
| 2019 | 1.19 | 1.47 | 1.47 | 1.47 | 1.47 | 1.06 | 1.21 | 1.47 | 1.47 | 1.44 | 1.42 | 1.47 |
| 2020 | 1.47 | 1.47 | 1.47 | 1.47 | 1.27 | 1.35 | 1.47 | 1.26 | 1.47 | 1.23 | 1.47 | 1.47 |
| 2021 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.04 | 1.47 | 1.47 |
| 2022 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 |
| 2023 | 1.47 | 1.47 | 1.47 | 1.47 | 1.40 | 1.08 | 1.25 | 1.12 | 1.31 | 1.22 | 1.28 | 1.47 |
| 2024 | 1.47 | 1.47 | 1.47 | 1.47 | 0.90 | 0.64 | 0.94 | 1.21 | 1.47 | 1.34 | 0.72 | 0.24 |
| 2025 | 1.47 | 1.47 | 1.47 | 1.47 | 1.38 | 1.40 | 1.36 | 1.12 | 1.38 | 1.43 | 1.47 | 1.47 |
| 2026 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.40 | 1.47 | 1.47 | 1.20 | 1.30 |
| 2027 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.38 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 |
| 2028 | 1.47 | 1.47 | 1.47 | 1.47 | 1.31 | 1.10 | 1.31 | 1.35 | 1.47 | 1.47 | 1.47 | 0.80 |
| 2029 | 1.47 | 1.47 | 1.47 | 1.47 | 0.58 | 1.03 | 1.11 | 1.32 | 1.47 | 1.20 | 1.42 | 1.47 |

Los caudales turbinables se obtuvieron bajo la condición: si $Q_{captado} > Q_{diseño}$ entonces el caudal turbinable será el $Q_{diseño}$. En caso contrario será el $Q_{captado}$.

7. Tabla de potencias efectivas

| AÑO | POTENCIAS EFECTIVAS (kW) | | | | | | | | | | | |
|------|--------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Sep | Oct | Nov | Dic |
| 1965 | 4759.93 | 6128.60 | 6128.60 | 6128.60 | 5107.49 | 4601.52 | 6013.43 | 5691.68 | 6128.60 | 5624.10 | 5171.12 | 6128.60 |
| 1966 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 4127.01 | 6128.60 | 5896.20 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 |
| 1967 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5704.29 | 3951.43 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5420.62 |
| 1968 | 6128.60 | 4958.70 | 6128.60 | 6128.60 | 3125.23 | 3695.65 | 4233.66 | 5062.90 | 5755.53 | 4366.54 | 4862.06 | 3863.40 |
| 1969 | 3259.14 | 6128.60 | 6128.60 | 6128.60 | 5192.74 | 3439.88 | 4926.38 | 5958.11 | 6128.60 | 5442.93 | 6098.31 | 6128.60 |
| 1970 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5667.25 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5842.53 | 6128.60 |
| 1971 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5677.91 | 5960.14 | 6128.60 | 6128.60 | 5474.90 | 4233.28 | 6128.60 |
| 1972 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6114.34 | 4243.94 | 6128.60 |
| 1973 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5936.79 | 6128.60 | 6128.60 | 6128.60 | 6128.60 |
| 1974 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 4084.39 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 4798.12 | 5307.78 |
| 1975 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6104.20 | 6128.60 | 6128.60 | 6128.60 | 5602.79 | 5672.02 | 4867.69 |
| 1976 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 4574.62 | 5518.05 | 6034.74 | 6128.60 | 6128.60 | 5037.95 | 3785.68 | 6128.60 |
| 1977 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 4409.69 | 5565.82 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 |
| 1978 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 4819.74 | 4558.90 | 4905.07 | 5808.91 | 6128.60 | 6128.60 | 4510.37 | 6128.60 |
| 1979 | 5256.44 | 6128.60 | 6128.60 | 6128.60 | 5341.95 | 4217.86 | 5661.74 | 6075.34 | 6128.60 | 4867.43 | 3540.56 | 1189.05 |
| 1980 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 4521.33 | 4782.70 | 5022.30 | 4615.29 | 6128.60 | 5485.56 | 6128.60 | 6128.60 |
| 1981 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5480.49 | 5837.77 | 6128.60 | 5723.65 | 6128.60 | 6128.60 | 6128.60 | 6128.60 |
| 1982 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 4271.15 | 5725.68 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 |
| 1983 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5086.17 | 6114.86 | 5107.56 | 5478.53 | 6128.60 | 4963.35 | 3700.42 | 6128.60 |
| 1984 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6002.77 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 |
| 1985 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6075.34 | 6128.60 | 4601.00 | 4915.35 | 6128.60 |
| 1986 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5847.90 | 5021.92 | 6128.60 |
| 1987 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 3945.84 | 3525.14 | 5459.25 | 5467.87 | 5830.13 | 5368.32 | 5203.10 | 6128.60 |
| 1988 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6050.92 | 5810.94 | 5180.13 | 5947.36 | 5304.38 | 3210.18 | 3626.43 |
| 1989 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 4793.36 | 6128.60 | 5094.87 | 6128.60 | 6128.60 | 6128.60 | 6128.60 |
| 1990 | 6128.60 | 6128.60 | 6128.60 | 5385.06 | 2059.50 | 5912.37 | 4318.92 | 5094.87 | 6128.60 | 5837.25 | 6128.60 | 6128.60 |
| 1991 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5475.42 | 6128.60 | 5276.04 | 6128.60 | 5986.45 | 5203.10 | 3570.01 |
| 1992 | 6128.60 | 3785.15 | 6128.60 | 6128.60 | 3647.44 | 3088.19 | 4510.75 | 5105.53 | 5265.29 | 5783.96 | 3391.36 | 2385.17 |
| 1993 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 4367.06 | 5491.22 | 5606.42 | 6128.60 | 6128.60 | 6128.60 | 6128.60 |
| 1994 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5517.53 | 6128.60 | 6128.60 |
| 1995 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5352.60 | 4644.15 | 5608.45 | 6043.37 | 6128.60 | 5187.15 | 6128.60 | 6128.60 |
| 1996 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5123.73 | 5544.51 | 6128.60 | 6128.60 | 5315.04 | 5490.84 | 4596.87 |
| 1997 | 6128.60 | 6128.60 | 6128.60 | 5825.15 | 5032.88 | 5656.60 | 6128.60 | 6128.60 | 6128.60 | 5410.95 | 6128.60 | 6128.60 |
| 1998 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5469.83 | 4473.64 | 5874.88 | 5670.36 | 6128.60 | 5698.70 | 5181.78 | 3682.85 |
| 1999 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5923.03 | 5693.71 | 6128.60 | 6128.60 | 6128.60 | 4414.46 | 6128.60 |
| 2000 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 |
| 2001 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5613.44 | 6128.60 | 5578.60 |
| 2002 | 5380.56 | 6128.60 | 6128.60 | 6128.60 | 6024.01 | 4335.09 | 6066.71 | 6128.60 | 6128.60 | 5720.02 | 6128.60 | 6128.60 |
| 2003 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 4665.47 | 5373.99 | 4689.89 | 6128.60 | 6128.60 | 2975.72 | 6128.60 |
| 2004 | 3586.38 | 6128.60 | 6128.60 | 6128.60 | 4585.28 | 3365.28 | 6128.60 | 4775.15 | 5446.46 | 5229.78 | 6128.60 | 6128.60 |
| 2005 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5032.88 | 4026.03 | 4734.55 | 4519.37 | 5073.46 | 3865.65 | 2901.12 | 4799.99 |
| 2006 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5102.42 | 5864.23 | 6128.60 | 6128.60 | 5474.90 | 5799.91 | 6128.60 |
| 2007 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5859.09 | 6088.03 | 6128.60 | 6128.60 | 6128.60 | 5267.04 | 4213.21 |
| 2008 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 4851.71 | 3653.03 | 5512.53 | 5691.68 | 5233.32 | 3801.70 | 3817.65 | 4833.84 |
| 2009 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 4921.24 | 6128.60 | 5990.08 | 6128.60 | 6128.60 | 6128.60 | 6128.60 |
| 2010 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5005.98 | 6128.60 | 6128.60 |
| 2011 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 |
| 2012 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 4420.35 | 5608.45 | 4945.67 | 5989.99 | 5315.04 | 4830.09 | 6128.60 |
| 2013 | 4003.89 | 6128.60 | 6128.60 | 6128.60 | 5746.92 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 |
| 2014 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5981.46 | 5723.65 | 6128.60 | 5208.47 | 3988.17 | 6128.60 |
| 2015 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 4249.83 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5021.92 | 5093.38 |
| 2016 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5901.71 | 6128.60 | 6128.60 | 6128.60 | 5496.21 | 3828.31 | 3389.46 |
| 2017 | 3868.48 | 6128.60 | 6128.60 | 6128.60 | 4233.59 | 4324.44 | 6128.60 | 6128.60 | 6128.60 | 5805.27 | 5032.58 | 4359.91 |
| 2018 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 4926.31 | 3525.14 | 4350.89 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 |
| 2019 | 4951.76 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 4431.01 | 5043.61 | 6128.60 | 6128.60 | 6018.42 | 5938.45 | 6128.60 |
| 2020 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5278.00 | 5624.63 | 6128.60 | 5265.38 | 6128.60 | 5144.52 | 6128.60 | 6128.60 |
| 2021 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 4334.57 | 6128.60 | 6128.60 |
| 2022 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 |
| 2023 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5842.84 | 4516.27 | 5192.82 | 4689.89 | 5457.12 | 5101.89 | 5330.98 | 6128.60 |
| 2024 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 3732.69 | 2661.90 | 3935.26 | 5062.90 | 6128.60 | 5581.47 | 2986.38 | 1019.78 |
| 2025 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5736.27 | 5816.46 | 5661.74 | 4679.23 | 5734.21 | 5975.79 | 6128.60 | 6128.60 |
| 2026 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5851.54 | 6128.60 | 6128.60 | 4989.95 | 5409.34 |
| 2027 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5757.65 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 6128.60 |
| 2028 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 5469.83 | 4601.52 | 5469.91 | 5638.39 | 6128.60 | 6128.60 | 6128.60 | 3333.04 |
| 2029 | 6128.60 | 6128.60 | 6128.60 | 6128.60 | 2421.85 | 4303.12 | 4617.32 | 5489.19 | 6128.60 | 4984.66 | 5938.45 | 6128.60 |

8. Tabla de energía producida

| AÑO | ENERGÍA (kWh) | | | | | | | | | | | |
|------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Sep | Oct | Nov | Dic |
| 1965 | 3,541,390 | 4,118,417 | 4,559,676 | 4,412,589 | 3,799,969 | 3,313,098 | 4,473,990 | 4,234,607 | 4,412,589 | 4,184,330 | 3,723,210 | 4,559,676 |
| 1966 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 3,070,499 | 4,412,589 | 4,386,771 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 |
| 1967 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,243,995 | 2,845,030 | 4,559,676 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,032,941 |
| 1968 | 4,559,676 | 3,332,248 | 4,559,676 | 4,412,589 | 2,660,871 | 3,149,873 | 3,766,795 | 3,766,795 | 4,143,978 | 3,248,705 | 3,500,686 | 2,874,370 |
| 1969 | 2,424,797 | 4,118,417 | 4,559,676 | 4,412,589 | 3,863,402 | 2,476,713 | 3,665,229 | 4,432,833 | 4,412,589 | 4,049,537 | 4,390,783 | 4,559,676 |
| 1970 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 4,080,423 | 4,559,676 | 4,559,676 | 4,412,589 | 4,559,676 | 4,206,625 | 4,559,676 |
| 1971 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 4,088,096 | 4,434,345 | 4,559,676 | 4,412,589 | 4,073,324 | 3,047,964 | 4,559,676 |
| 1972 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 | 4,559,676 | 4,412,589 | 4,549,066 | 3,055,637 | 4,559,676 |
| 1973 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 | 4,416,975 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 |
| 1974 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 3,038,783 | 4,412,589 | 4,559,676 | 4,559,676 | 4,412,589 | 4,559,676 | 3,454,646 | 3,948,986 |
| 1975 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 4,395,026 | 4,559,676 | 4,559,676 | 4,412,589 | 4,168,472 | 4,083,853 | 3,621,564 |
| 1976 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 3,403,518 | 3,972,998 | 4,489,848 | 4,559,676 | 4,412,589 | 3,748,234 | 2,725,687 | 4,559,676 |
| 1977 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 3,174,979 | 4,140,971 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 |
| 1978 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 3,585,886 | 3,282,405 | 3,649,371 | 4,321,826 | 4,412,589 | 4,559,676 | 3,247,468 | 4,559,676 |
| 1979 | 3,910,790 | 4,118,417 | 4,559,676 | 4,412,589 | 3,974,408 | 3,036,861 | 4,412,589 | 4,412,589 | 4,412,589 | 3,621,369 | 2,549,202 | 884,651 |
| 1980 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 3,363,873 | 3,443,543 | 3,736,591 | 3,433,775 | 4,412,589 | 4,081,253 | 4,412,589 | 4,559,676 |
| 1981 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,077,485 | 4,203,195 | 4,559,676 | 4,258,394 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 |
| 1982 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 3,075,227 | 4,259,907 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 |
| 1983 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 3,784,111 | 4,402,700 | 4,412,589 | 4,076,027 | 4,412,589 | 3,692,731 | 2,664,301 | 4,559,676 |
| 1984 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,466,061 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 |
| 1985 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 | 4,520,052 | 4,412,589 | 3,423,144 | 3,539,052 | 4,559,676 |
| 1986 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 | 4,559,676 | 4,412,589 | 4,350,840 | 3,615,784 | 4,559,676 |
| 1987 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 2,935,706 | 2,538,099 | 4,061,681 | 4,068,098 | 4,197,691 | 3,994,034 | 3,746,230 | 4,559,676 |
| 1988 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 4,356,660 | 4,323,339 | 3,854,014 | 4,282,097 | 3,946,460 | 2,311,332 | 2,698,066 |
| 1989 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 3,451,216 | 4,559,676 | 3,790,582 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 |
| 1990 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 3,877,245 | 1,532,268 | 4,256,908 | 3,213,275 | 4,412,589 | 4,342,911 | 4,412,589 | 4,559,676 |
| 1991 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 3,942,305 | 4,559,676 | 3,925,375 | 4,412,589 | 4,453,917 | 3,746,230 | 2,656,089 |
| 1992 | 4,559,676 | 2,543,618 | 4,559,676 | 4,412,589 | 2,713,693 | 2,223,496 | 3,355,997 | 3,798,511 | 3,791,009 | 4,303,266 | 2,441,777 | 1,774,567 |
| 1993 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 3,144,286 | 4,085,468 | 4,171,175 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 |
| 1994 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 | 4,559,676 | 4,412,589 | 4,105,040 | 4,412,589 | 4,559,676 |
| 1995 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 3,982,337 | 3,343,791 | 4,172,687 | 4,496,265 | 4,412,589 | 3,859,240 | 4,412,589 | 4,559,676 |
| 1996 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 3,689,087 | 4,125,113 | 4,559,676 | 4,412,589 | 3,954,389 | 3,953,407 | 3,420,074 |
| 1997 | 4,559,676 | 4,118,417 | 4,559,676 | 4,194,105 | 3,744,466 | 4,072,750 | 4,559,676 | 4,559,676 | 4,412,589 | 4,025,750 | 4,412,589 | 4,559,676 |
| 1998 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,069,556 | 3,221,019 | 4,370,913 | 4,218,749 | 4,412,589 | 4,239,834 | 3,730,883 | 2,740,043 |
| 1999 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 4,264,581 | 4,236,119 | 4,559,676 | 4,412,589 | 4,559,676 | 3,178,409 | 4,559,676 |
| 2000 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 |
| 2001 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 | 4,559,676 | 4,412,589 | 4,176,401 | 4,412,589 | 4,150,477 |
| 2002 | 4,003,140 | 4,118,417 | 4,559,676 | 4,412,589 | 4,481,866 | 3,121,267 | 4,513,635 | 4,559,676 | 4,412,589 | 4,255,692 | 4,412,589 | 4,559,676 |
| 2003 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 3,359,137 | 3,998,249 | 3,489,279 | 4,412,589 | 4,559,676 | 2,142,520 | 4,559,676 |
| 2004 | 2,668,265 | 4,118,417 | 4,559,676 | 4,412,589 | 3,411,447 | 2,423,001 | 4,559,676 | 3,552,711 | 3,921,454 | 3,890,956 | 4,412,589 | 4,559,676 |
| 2005 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 3,744,466 | 2,898,742 | 3,522,507 | 3,362,414 | 3,652,890 | 2,876,041 | 2,088,807 | 3,571,192 |
| 2006 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 3,673,741 | 4,362,984 | 4,559,676 | 4,412,589 | 4,073,324 | 4,175,932 | 4,559,676 |
| 2007 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 4,218,542 | 4,529,493 | 4,559,676 | 4,412,589 | 4,559,676 | 3,792,269 | 3,134,629 |
| 2008 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 3,609,673 | 2,630,178 | 4,101,326 | 4,234,607 | 3,767,989 | 2,828,467 | 2,748,707 | 3,596,378 |
| 2009 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 3,543,295 | 4,559,676 | 4,456,620 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 |
| 2010 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 | 4,559,676 | 4,412,589 | 3,724,447 | 4,412,589 | 4,559,676 |
| 2011 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 |
| 2012 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 3,182,653 | 4,172,687 | 3,679,575 | 4,312,790 | 3,954,389 | 3,477,666 | 4,559,676 |
| 2013 | 2,978,896 | 4,118,417 | 4,559,676 | 4,412,589 | 4,275,711 | 4,412,589 | 4,559,676 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 |
| 2014 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,450,203 | 4,258,394 | 4,412,589 | 3,875,098 | 2,871,479 | 4,559,676 |
| 2015 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 3,059,881 | 4,559,676 | 4,559,676 | 4,412,589 | 4,559,676 | 3,615,784 | 3,789,473 |
| 2016 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 4,249,235 | 4,559,676 | 4,559,676 | 4,412,589 | 4,089,182 | 2,756,380 | 2,521,761 |
| 2017 | 2,878,151 | 4,118,417 | 4,559,676 | 4,412,589 | 3,149,789 | 3,113,593 | 4,559,676 | 4,559,676 | 4,412,589 | 4,319,124 | 3,623,458 | 3,243,769 |
| 2018 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 3,665,176 | 2,538,099 | 3,237,062 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 |
| 2019 | 3,684,113 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 3,190,326 | 3,752,449 | 4,559,676 | 4,412,589 | 4,477,704 | 4,275,684 | 4,559,676 |
| 2020 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 3,926,834 | 4,049,730 | 4,559,676 | 3,917,446 | 4,412,589 | 3,827,524 | 4,412,589 | 4,559,676 |
| 2021 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 | 4,559,676 | 4,412,589 | 3,224,918 | 4,412,589 | 4,559,676 |
| 2022 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 |
| 2023 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,347,072 | 3,251,712 | 3,863,455 | 3,489,279 | 3,929,127 | 3,795,808 | 3,838,309 | 4,559,676 |
| 2024 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 2,777,125 | 1,916,566 | 2,927,830 | 3,766,795 | 4,412,589 | 4,152,614 | 2,150,193 | 758,719 |
| 2025 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,267,782 | 4,187,849 | 4,212,332 | 3,481,350 | 4,128,632 | 4,445,988 | 4,412,589 | 4,559,676 |
| 2026 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 | 4,353,543 | 4,412,589 | 4,559,676 | 3,592,765 | 4,024,545 |
| 2027 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,283,694 | 4,559,676 | 4,412,589 | 4,559,676 | 4,412,589 | 4,559,676 |
| 2028 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 4,069,556 | 3,313,098 | 4,069,610 | 4,194,962 | 4,412,589 | 4,559,676 | 4,412,589 | 2,479,784 |
| 2029 | 4,559,676 | 4,118,417 | 4,559,676 | 4,412,589 | 1,801,855 | 3,098,247 | 3,435,288 | 4,083,956 | 4,412,589 | 3,708,589 | 4,275,684 | 4,559,676 |

Factor de planta = 0.95

Cálculo del factor de planta $Q=1.44\text{m}^3/\text{s}$

1. Parámetros de entrada

| Parámetros de entrada | |
|------------------------------------|-------|
| Caudal (m ³ /s) | 1.44 |
| Longitud de Canal (m) | 7400 |
| Longitud de la tubería Forzada (m) | 735 |
| Pendiente del canal (m) | 0.001 |
| Diámetro de la tubería forzada (m) | 0.59 |

2. Cálculo de pérdidas de energía en la tubería forzada

| En la tubería forzada | |
|-------------------------------------|------------|
| Área del conducto (m ²) | 0.27 |
| Velocidad (m/s) | 5.27 |
| Re | 3107567.70 |
| f | 0.01 |
| Pérdida en el túnel (m) | 21.72 |

3. Cálculo de pérdidas de energía en el canal

| | |
|---------------------|---------------|
| En el canal | EC. Bernoulli |
| Pérdida en el canal | 7.400 |

4. Pérdida total, altura neta y potencia generada

| | |
|------------------------|--------|
| Pérdida total (m) | 29.12 |
| Altura neta (m) | 500.88 |
| Potencia generada (kW) | 6014.2 |

5. Tabla de caudales captados considerando el caudal ecológico

| AÑO | CAUDALES CONSIDERANDO EL CAUDAL ECOLÓGICO (m³/s) | | | | | | | | | | |
|------|--|------|------|------|------|------|------|------|------|------|------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Oct | Nov | Dic |
| 1965 | 1.14 | 4.10 | 3.81 | 1.67 | 1.23 | 1.10 | 1.44 | 1.37 | 1.35 | 1.24 | 1.51 |
| 1966 | 4.01 | 3.19 | 3.71 | 2.43 | 0.99 | 1.53 | 1.41 | 1.48 | 1.81 | 1.63 | 1.76 |
| 1967 | 1.49 | 7.76 | 7.21 | 2.42 | 1.37 | 0.95 | 1.63 | 1.92 | 2.31 | 1.78 | 1.30 |
| 1968 | 1.55 | 1.19 | 2.46 | 1.80 | 0.75 | 0.89 | 1.02 | 1.21 | 1.05 | 1.17 | 0.93 |
| 1969 | 0.78 | 2.36 | 3.14 | 3.13 | 1.25 | 0.83 | 1.18 | 1.43 | 1.31 | 1.46 | 4.15 |
| 1970 | 6.02 | 3.09 | 3.20 | 2.97 | 2.00 | 1.36 | 1.53 | 1.54 | 1.99 | 1.40 | 2.72 |
| 1971 | 3.67 | 4.90 | 7.02 | 3.94 | 1.79 | 1.36 | 1.43 | 1.66 | 1.31 | 1.02 | 1.83 |
| 1972 | 4.83 | 4.12 | 8.48 | 5.07 | 1.90 | 1.60 | 1.64 | 1.50 | 1.47 | 1.02 | 2.41 |
| 1973 | 5.27 | 7.28 | 7.00 | 5.56 | 2.04 | 1.54 | 1.66 | 1.42 | 1.83 | 1.90 | 3.40 |
| 1974 | 3.95 | 4.49 | 5.59 | 2.69 | 0.98 | 1.52 | 1.57 | 1.67 | 1.69 | 1.15 | 1.27 |
| 1975 | 2.27 | 2.46 | 6.61 | 2.86 | 1.74 | 1.46 | 1.48 | 1.58 | 1.34 | 1.36 | 1.17 |
| 1976 | 2.74 | 4.80 | 4.44 | 2.56 | 1.10 | 1.32 | 1.45 | 1.56 | 1.21 | 0.91 | 1.77 |
| 1977 | 1.65 | 6.12 | 3.89 | 2.34 | 1.64 | 1.06 | 1.34 | 1.47 | 1.56 | 2.19 | 1.91 |
| 1978 | 2.11 | 4.77 | 2.88 | 1.82 | 1.16 | 1.09 | 1.18 | 1.39 | 1.56 | 1.08 | 1.65 |
| 1979 | 1.26 | 4.64 | 6.15 | 3.04 | 1.28 | 1.01 | 1.36 | 1.46 | 1.17 | 0.85 | 0.29 |
| 1980 | 2.27 | 2.00 | 3.73 | 2.57 | 1.08 | 1.15 | 1.20 | 1.11 | 1.32 | 1.96 | 2.01 |
| 1981 | 2.70 | 7.45 | 6.07 | 2.68 | 1.31 | 1.40 | 1.62 | 1.37 | 1.79 | 1.90 | 2.52 |
| 1982 | 2.29 | 7.79 | 3.39 | 1.80 | 1.48 | 1.02 | 1.37 | 2.09 | 1.68 | 2.09 | 1.56 |
| 1983 | 2.39 | 1.48 | 3.77 | 3.75 | 1.22 | 1.47 | 1.23 | 1.31 | 1.19 | 0.89 | 1.79 |
| 1984 | 2.52 | 8.75 | 6.87 | 4.19 | 2.02 | 1.62 | 1.44 | 1.50 | 1.91 | 1.60 | 3.45 |
| 1985 | 2.06 | 3.63 | 5.04 | 3.95 | 1.78 | 1.60 | 1.73 | 1.46 | 1.10 | 1.18 | 2.24 |
| 1986 | 4.60 | 5.11 | 6.85 | 5.15 | 2.35 | 1.83 | 1.68 | 1.53 | 1.40 | 1.20 | 1.71 |
| 1987 | 4.75 | 4.86 | 3.17 | 1.67 | 0.95 | 0.85 | 1.31 | 1.31 | 1.29 | 1.25 | 2.30 |
| 1988 | 3.87 | 5.54 | 3.43 | 4.01 | 1.73 | 1.45 | 1.39 | 1.24 | 1.27 | 0.77 | 0.87 |
| 1989 | 4.13 | 6.43 | 6.05 | 4.11 | 1.80 | 1.15 | 1.49 | 1.22 | 1.59 | 1.56 | 1.88 |
| 1990 | 2.64 | 1.58 | 1.88 | 1.29 | 0.49 | 1.42 | 1.04 | 1.22 | 1.40 | 2.86 | 2.34 |
| 1991 | 2.09 | 2.64 | 5.23 | 2.42 | 1.80 | 1.31 | 1.53 | 1.27 | 1.44 | 1.25 | 0.86 |
| 1992 | 1.56 | 0.91 | 2.48 | 1.77 | 0.87 | 0.74 | 1.08 | 1.22 | 1.39 | 0.81 | 0.57 |
| 1993 | 2.13 | 4.18 | 5.11 | 3.48 | 1.85 | 1.05 | 1.32 | 1.34 | 1.65 | 2.95 | 4.17 |
| 1994 | 4.88 | 5.44 | 5.37 | 5.33 | 2.63 | 2.00 | 1.66 | 1.55 | 1.32 | 1.58 | 1.70 |
| 1995 | 2.64 | 2.30 | 3.77 | 3.54 | 1.28 | 1.11 | 1.35 | 1.45 | 1.24 | 1.62 | 2.10 |
| 1996 | 3.72 | 5.75 | 5.17 | 3.71 | 1.60 | 1.23 | 1.33 | 1.57 | 1.27 | 1.32 | 1.10 |
| 1997 | 2.25 | 4.51 | 2.97 | 1.40 | 1.21 | 1.36 | 1.70 | 1.73 | 1.30 | 1.68 | 2.71 |
| 1998 | 4.95 | 5.20 | 4.88 | 2.78 | 1.31 | 1.07 | 1.41 | 1.36 | 1.37 | 1.24 | 0.88 |
| 1999 | 1.58 | 4.98 | 4.84 | 3.78 | 2.29 | 1.42 | 1.37 | 1.60 | 1.50 | 1.06 | 2.72 |
| 2000 | 4.43 | 6.03 | 5.55 | 2.80 | 2.29 | 1.50 | 1.79 | 1.55 | 2.12 | 1.59 | 2.68 |
| 2001 | 6.22 | 5.23 | 5.84 | 3.83 | 2.36 | 1.62 | 1.73 | 1.79 | 1.35 | 1.77 | 1.34 |
| 2002 | 1.29 | 3.39 | 5.31 | 3.38 | 1.44 | 1.04 | 1.46 | 1.63 | 1.37 | 1.93 | 2.44 |
| 2003 | 4.06 | 4.55 | 5.38 | 3.57 | 1.47 | 1.12 | 1.29 | 1.12 | 1.54 | 0.71 | 1.77 |
| 2004 | 0.86 | 3.58 | 3.23 | 2.71 | 1.10 | 0.81 | 1.51 | 1.15 | 1.25 | 2.13 | 3.12 |
| 2005 | 3.88 | 3.74 | 4.92 | 3.90 | 1.21 | 0.97 | 1.14 | 1.08 | 0.93 | 0.70 | 1.15 |
| 2006 | 2.83 | 4.19 | 5.68 | 4.63 | 1.53 | 1.22 | 1.41 | 1.54 | 1.31 | 1.39 | 2.37 |
| 2007 | 4.56 | 4.81 | 5.82 | 4.31 | 1.84 | 1.41 | 1.46 | 1.60 | 1.60 | 1.26 | 1.01 |
| 2008 | 4.33 | 5.60 | 4.58 | 2.74 | 1.16 | 0.88 | 1.32 | 1.37 | 0.91 | 0.92 | 1.16 |
| 2009 | 3.49 | 6.71 | 5.79 | 3.45 | 1.57 | 1.18 | 1.50 | 1.44 | 1.78 | 3.07 | 4.49 |
| 2010 | 7.15 | 4.29 | 4.65 | 4.01 | 1.71 | 1.91 | 1.84 | 1.58 | 1.20 | 1.54 | 2.75 |
| 2011 | 3.64 | 6.61 | 8.03 | 6.12 | 2.42 | 1.60 | 1.65 | 1.56 | 2.01 | 1.78 | 1.47 |
| 2012 | 3.37 | 6.49 | 5.47 | 4.49 | 1.73 | 1.06 | 1.35 | 1.19 | 1.27 | 1.16 | 2.51 |
| 2013 | 0.96 | 6.77 | 6.79 | 2.88 | 1.38 | 1.53 | 1.67 | 1.78 | 1.93 | 1.69 | 2.83 |
| 2014 | 3.51 | 3.79 | 5.41 | 3.18 | 1.71 | 1.75 | 1.43 | 1.37 | 1.25 | 0.96 | 1.68 |
| 2015 | 3.94 | 4.51 | 5.27 | 3.47 | 1.91 | 1.02 | 1.64 | 1.48 | 1.59 | 1.20 | 1.22 |
| 2016 | 2.38 | 1.58 | 3.76 | 2.66 | 1.73 | 1.42 | 1.87 | 1.51 | 1.32 | 0.92 | 0.81 |
| 2017 | 0.93 | 2.46 | 4.14 | 1.91 | 1.02 | 1.04 | 1.55 | 1.73 | 1.39 | 1.21 | 1.05 |
| 2018 | 3.13 | 4.54 | 3.12 | 2.52 | 1.18 | 0.85 | 1.04 | 1.59 | 1.86 | 1.54 | 3.61 |
| 2019 | 1.19 | 4.59 | 3.29 | 2.26 | 1.59 | 1.06 | 1.21 | 1.49 | 1.44 | 1.42 | 2.14 |
| 2020 | 1.66 | 4.93 | 3.01 | 2.91 | 1.27 | 1.35 | 1.50 | 1.26 | 1.23 | 1.66 | 3.13 |
| 2021 | 2.84 | 3.70 | 4.55 | 4.62 | 2.30 | 1.76 | 1.85 | 1.47 | 1.04 | 1.52 | 2.78 |
| 2022 | 2.37 | 4.13 | 2.91 | 3.57 | 2.01 | 2.08 | 1.86 | 2.02 | 2.23 | 3.39 | 4.22 |
| 2023 | 6.12 | 2.07 | 4.39 | 2.41 | 1.40 | 1.08 | 1.25 | 1.12 | 1.22 | 1.28 | 2.14 |
| 2024 | 2.99 | 4.99 | 5.78 | 2.39 | 0.90 | 0.64 | 0.94 | 1.21 | 1.34 | 0.72 | 0.24 |
| 2025 | 2.35 | 5.41 | 4.02 | 1.85 | 1.38 | 1.40 | 1.36 | 1.12 | 1.43 | 1.70 | 1.51 |
| 2026 | 4.17 | 5.80 | 5.50 | 3.06 | 1.88 | 1.51 | 1.53 | 1.40 | 1.70 | 1.20 | 1.30 |
| 2027 | 2.60 | 5.61 | 9.23 | 5.03 | 2.35 | 1.47 | 1.38 | 1.64 | 2.02 | 2.33 | 1.86 |
| 2028 | 1.52 | 2.90 | 3.91 | 2.23 | 1.31 | 1.10 | 1.31 | 1.35 | 1.55 | 1.48 | 0.80 |
| 2029 | 1.95 | 1.59 | 2.21 | 1.67 | 0.58 | 1.03 | 1.11 | 1.32 | 1.20 | 1.42 | 3.31 |

6. Tabla de caudales turbinables

| AÑO | CAUDALES TURBINABLES (m³/s) | | | | | | | | | | | |
|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Sep | Oct | Nov | Dic |
| 1965 | 1.14 | 1.44 | 1.44 | 1.44 | 1.23 | 1.10 | 1.44 | 1.37 | 1.44 | 1.35 | 1.24 | 1.44 |
| 1966 | 1.44 | 1.44 | 1.44 | 1.44 | 0.99 | 1.44 | 1.41 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 |
| 1967 | 1.44 | 1.44 | 1.44 | 1.44 | 1.37 | 0.95 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.30 |
| 1968 | 1.44 | 1.19 | 1.44 | 1.44 | 0.75 | 0.89 | 1.02 | 1.21 | 1.38 | 1.05 | 1.17 | 0.93 |
| 1969 | 0.78 | 1.44 | 1.44 | 1.44 | 1.25 | 0.83 | 1.18 | 1.43 | 1.44 | 1.31 | 1.44 | 1.44 |
| 1970 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.36 | 1.44 | 1.44 | 1.44 | 1.44 | 1.40 | 1.44 |
| 1971 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.36 | 1.43 | 1.44 | 1.44 | 1.31 | 1.02 | 1.44 |
| 1972 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.02 | 1.44 |
| 1973 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.42 | 1.44 | 1.44 | 1.44 | 1.44 |
| 1974 | 1.44 | 1.44 | 1.44 | 1.44 | 0.98 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.15 | 1.27 |
| 1975 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.34 | 1.36 | 1.17 |
| 1976 | 1.44 | 1.44 | 1.44 | 1.44 | 1.10 | 1.32 | 1.44 | 1.44 | 1.44 | 1.21 | 0.91 | 1.44 |
| 1977 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.06 | 1.34 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 |
| 1978 | 1.44 | 1.44 | 1.44 | 1.44 | 1.16 | 1.09 | 1.18 | 1.39 | 1.44 | 1.44 | 1.08 | 1.44 |
| 1979 | 1.26 | 1.44 | 1.44 | 1.44 | 1.28 | 1.01 | 1.36 | 1.44 | 1.44 | 1.17 | 0.85 | 0.29 |
| 1980 | 1.44 | 1.44 | 1.44 | 1.44 | 1.08 | 1.15 | 1.20 | 1.11 | 1.44 | 1.32 | 1.44 | 1.44 |
| 1981 | 1.44 | 1.44 | 1.44 | 1.44 | 1.31 | 1.40 | 1.44 | 1.37 | 1.44 | 1.44 | 1.44 | 1.44 |
| 1982 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.02 | 1.37 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 |
| 1983 | 1.44 | 1.44 | 1.44 | 1.44 | 1.22 | 1.44 | 1.23 | 1.31 | 1.44 | 1.19 | 0.89 | 1.44 |
| 1984 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 |
| 1985 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.10 | 1.18 | 1.44 |
| 1986 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.40 | 1.20 | 1.44 |
| 1987 | 1.44 | 1.44 | 1.44 | 1.44 | 0.95 | 0.85 | 1.31 | 1.31 | 1.40 | 1.29 | 1.25 | 1.44 |
| 1988 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.39 | 1.24 | 1.43 | 1.27 | 0.77 | 0.87 |
| 1989 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.15 | 1.44 | 1.22 | 1.44 | 1.44 | 1.44 | 1.44 |
| 1990 | 1.44 | 1.44 | 1.44 | 1.29 | 0.49 | 1.42 | 1.04 | 1.22 | 1.44 | 1.40 | 1.44 | 1.44 |
| 1991 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.31 | 1.44 | 1.27 | 1.44 | 1.44 | 1.25 | 0.86 |
| 1992 | 1.44 | 0.91 | 1.44 | 1.44 | 0.87 | 0.74 | 1.08 | 1.22 | 1.26 | 1.39 | 0.81 | 0.57 |
| 1993 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.05 | 1.32 | 1.34 | 1.44 | 1.44 | 1.44 | 1.44 |
| 1994 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.32 | 1.44 | 1.44 |
| 1995 | 1.44 | 1.44 | 1.44 | 1.44 | 1.28 | 1.11 | 1.35 | 1.44 | 1.44 | 1.24 | 1.44 | 1.44 |
| 1996 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.23 | 1.33 | 1.44 | 1.44 | 1.27 | 1.32 | 1.10 |
| 1997 | 1.44 | 1.44 | 1.44 | 1.40 | 1.21 | 1.36 | 1.44 | 1.44 | 1.44 | 1.30 | 1.44 | 1.44 |
| 1998 | 1.44 | 1.44 | 1.44 | 1.44 | 1.31 | 1.07 | 1.41 | 1.36 | 1.44 | 1.37 | 1.24 | 0.88 |
| 1999 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.42 | 1.37 | 1.44 | 1.44 | 1.44 | 1.06 | 1.44 |
| 2000 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 |
| 2001 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.35 | 1.44 | 1.34 |
| 2002 | 1.29 | 1.44 | 1.44 | 1.44 | 1.44 | 1.04 | 1.44 | 1.44 | 1.44 | 1.37 | 1.44 | 1.44 |
| 2003 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.12 | 1.29 | 1.12 | 1.44 | 1.44 | 0.71 | 1.44 |
| 2004 | 0.86 | 1.44 | 1.44 | 1.44 | 1.10 | 0.81 | 1.44 | 1.15 | 1.31 | 1.25 | 1.44 | 1.44 |
| 2005 | 1.44 | 1.44 | 1.44 | 1.44 | 1.21 | 0.97 | 1.14 | 1.08 | 1.22 | 0.93 | 0.70 | 1.15 |
| 2006 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.22 | 1.41 | 1.44 | 1.44 | 1.31 | 1.39 | 1.44 |
| 2007 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.41 | 1.44 | 1.44 | 1.44 | 1.44 | 1.26 | 1.01 |
| 2008 | 1.44 | 1.44 | 1.44 | 1.44 | 1.16 | 0.88 | 1.32 | 1.37 | 1.26 | 0.91 | 0.92 | 1.16 |
| 2009 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.18 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 |
| 2010 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.20 | 1.44 | 1.44 |
| 2011 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 |
| 2012 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.06 | 1.35 | 1.19 | 1.44 | 1.27 | 1.16 | 1.44 |
| 2013 | 0.96 | 1.44 | 1.44 | 1.44 | 1.38 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 |
| 2014 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.43 | 1.37 | 1.44 | 1.25 | 0.96 | 1.44 |
| 2015 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.02 | 1.44 | 1.44 | 1.44 | 1.44 | 1.20 | 1.22 |
| 2016 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.42 | 1.44 | 1.44 | 1.44 | 1.32 | 0.92 | 0.81 |
| 2017 | 0.93 | 1.44 | 1.44 | 1.44 | 1.02 | 1.04 | 1.44 | 1.44 | 1.44 | 1.39 | 1.21 | 1.05 |
| 2018 | 1.44 | 1.44 | 1.44 | 1.44 | 1.18 | 0.85 | 1.04 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 |
| 2019 | 1.19 | 1.44 | 1.44 | 1.44 | 1.44 | 1.06 | 1.21 | 1.44 | 1.44 | 1.44 | 1.42 | 1.44 |
| 2020 | 1.44 | 1.44 | 1.44 | 1.44 | 1.27 | 1.35 | 1.44 | 1.26 | 1.44 | 1.23 | 1.44 | 1.44 |
| 2021 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.04 | 1.44 | 1.44 |
| 2022 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 |
| 2023 | 1.44 | 1.44 | 1.44 | 1.44 | 1.40 | 1.08 | 1.25 | 1.12 | 1.31 | 1.22 | 1.28 | 1.44 |
| 2024 | 1.44 | 1.44 | 1.44 | 1.44 | 0.90 | 0.64 | 0.94 | 1.21 | 1.44 | 1.34 | 0.72 | 0.24 |
| 2025 | 1.44 | 1.44 | 1.44 | 1.44 | 1.38 | 1.40 | 1.36 | 1.12 | 1.38 | 1.43 | 1.44 | 1.44 |
| 2026 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.40 | 1.44 | 1.44 | 1.20 | 1.30 |
| 2027 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 | 1.38 | 1.44 | 1.44 | 1.44 | 1.44 | 1.44 |
| 2028 | 1.44 | 1.44 | 1.44 | 1.44 | 1.31 | 1.10 | 1.31 | 1.35 | 1.44 | 1.44 | 1.44 | 0.80 |
| 2029 | 1.44 | 1.44 | 1.44 | 1.44 | 0.58 | 1.03 | 1.11 | 1.32 | 1.44 | 1.20 | 1.42 | 1.44 |

Los caudales turbinables se obtuvieron bajo la condición: si $Q_{captado} > Q_{diseño}$ entonces el caudal turbinable será el $Q_{diseño}$. En caso contrario será el $Q_{captado}$.

7. Tabla de potencias efectivas

| AÑO | POTENCIAS EFECTIVAS (kW) | | | | | | | | | | | |
|------|--------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Sep | Oct | Nov | Dic |
| 1965 | 4768.43 | 6014.24 | 6014.24 | 6014.24 | 5116.61 | 4609.74 | 6014.24 | 5701.84 | 6014.24 | 5634.14 | 5180.36 | 6014.24 |
| 1966 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 4134.39 | 6014.24 | 5906.73 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 |
| 1967 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5714.48 | 3958.49 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5430.30 |
| 1968 | 6014.24 | 4967.56 | 6014.24 | 6014.24 | 3130.81 | 3702.26 | 4241.22 | 5071.94 | 5765.80 | 4374.34 | 4870.75 | 3870.30 |
| 1969 | 3264.96 | 6014.24 | 6014.24 | 6014.24 | 5202.02 | 3446.02 | 4935.18 | 5968.75 | 6014.24 | 5452.65 | 6014.24 | 6014.24 |
| 1970 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5677.38 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5852.97 | 6014.24 |
| 1971 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5688.05 | 5970.79 | 6014.24 | 6014.24 | 5484.68 | 4240.84 | 6014.24 |
| 1972 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 4251.52 | 6014.24 |
| 1973 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5947.40 | 6014.24 | 6014.24 | 6014.24 | 6014.24 |
| 1974 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 4091.68 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 4806.69 | 5317.26 |
| 1975 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5612.79 | 5682.15 | 4876.39 |
| 1976 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 4582.79 | 5527.91 | 6014.24 | 6014.24 | 6014.24 | 5046.95 | 3792.44 | 6014.24 |
| 1977 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 4417.57 | 5575.76 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 |
| 1978 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 4828.35 | 4567.04 | 4913.83 | 5819.28 | 6014.24 | 6014.24 | 4518.43 | 6014.24 |
| 1979 | 5265.83 | 6014.24 | 6014.24 | 6014.24 | 5351.49 | 4225.40 | 5671.85 | 6014.24 | 6014.24 | 4876.13 | 3546.88 | 1191.17 |
| 1980 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 4529.41 | 4791.24 | 5031.27 | 4623.53 | 6014.24 | 5495.35 | 6014.24 | 6014.24 |
| 1981 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5490.28 | 5848.20 | 6014.24 | 5733.87 | 6014.24 | 6014.24 | 6014.24 | 6014.24 |
| 1982 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 4278.78 | 5735.91 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 |
| 1983 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5095.26 | 6014.24 | 5116.68 | 5488.31 | 6014.24 | 4972.21 | 3707.03 | 6014.24 |
| 1984 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6013.49 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 |
| 1985 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 4609.22 | 4924.13 | 6014.24 |
| 1986 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5858.35 | 5030.89 | 6014.24 |
| 1987 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 3952.89 | 3531.43 | 5469.00 | 5477.64 | 5840.54 | 5377.91 | 5212.39 | 6014.24 |
| 1988 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5821.32 | 5189.38 | 5957.98 | 5313.85 | 3215.92 | 3632.91 |
| 1989 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 4801.92 | 6014.24 | 5103.97 | 6014.24 | 6014.24 | 6014.24 | 6014.24 |
| 1990 | 6014.24 | 6014.24 | 6014.24 | 5394.68 | 2063.18 | 5922.93 | 4326.63 | 5103.97 | 6014.24 | 5847.67 | 6014.24 | 6014.24 |
| 1991 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5485.20 | 6014.24 | 5285.46 | 6014.24 | 5997.14 | 5212.39 | 3576.39 |
| 1992 | 6014.24 | 3791.91 | 6014.24 | 6014.24 | 3653.95 | 3093.70 | 4518.81 | 5114.64 | 5274.69 | 5794.29 | 3397.41 | 2389.43 |
| 1993 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 4374.86 | 5501.03 | 5616.43 | 6014.24 | 6014.24 | 6014.24 | 6014.24 |
| 1994 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5527.38 | 6014.24 | 6014.24 |
| 1995 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5362.16 | 4652.45 | 5618.47 | 6014.24 | 6014.24 | 5196.42 | 6014.24 | 6014.24 |
| 1996 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5132.88 | 5554.41 | 6014.24 | 6014.24 | 5324.53 | 5500.65 | 4605.08 |
| 1997 | 6014.24 | 6014.24 | 6014.24 | 5835.55 | 5041.87 | 5666.70 | 6014.24 | 6014.24 | 6014.24 | 5420.62 | 6014.24 | 6014.24 |
| 1998 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5479.60 | 4481.63 | 5885.38 | 5680.49 | 6014.24 | 5708.88 | 5191.04 | 3689.43 |
| 1999 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5933.61 | 5703.88 | 6014.24 | 6014.24 | 6014.24 | 4422.34 | 6014.24 |
| 2000 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 |
| 2001 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5623.47 | 6014.24 | 5588.56 |
| 2002 | 5390.17 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 4342.83 | 6014.24 | 6014.24 | 6014.24 | 5730.23 | 6014.24 | 6014.24 |
| 2003 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 4673.80 | 5383.59 | 4698.27 | 6014.24 | 6014.24 | 2981.04 | 6014.24 |
| 2004 | 3592.78 | 6014.24 | 6014.24 | 6014.24 | 4593.47 | 3371.29 | 6014.24 | 4783.68 | 5456.19 | 5239.12 | 6014.24 | 6014.24 |
| 2005 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5041.87 | 4033.22 | 4743.01 | 4527.45 | 5082.52 | 3872.55 | 2906.30 | 4808.56 |
| 2006 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5111.53 | 5874.70 | 6014.24 | 6014.24 | 5484.68 | 5810.26 | 6014.24 |
| 2007 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5869.55 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5276.45 | 4220.74 |
| 2008 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 4860.38 | 3659.55 | 5522.38 | 5701.84 | 5242.66 | 3808.49 | 3824.47 | 4842.47 |
| 2009 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 4930.03 | 6014.24 | 6000.78 | 6014.24 | 6014.24 | 6014.24 | 6014.24 |
| 2010 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5014.92 | 6014.24 | 6014.24 |
| 2011 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 |
| 2012 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 4428.25 | 5618.47 | 4954.50 | 6000.68 | 5324.53 | 4838.72 | 6014.24 |
| 2013 | 4011.04 | 6014.24 | 6014.24 | 6014.24 | 5757.19 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 |
| 2014 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5992.14 | 5733.87 | 6014.24 | 5217.77 | 3995.29 | 6014.24 |
| 2015 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 4257.42 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5030.89 | 5102.47 |
| 2016 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5912.26 | 6014.24 | 6014.24 | 6014.24 | 5506.03 | 3835.14 | 3395.52 |
| 2017 | 3875.39 | 6014.24 | 6014.24 | 6014.24 | 4241.15 | 4332.16 | 6014.24 | 6014.24 | 6014.24 | 5815.64 | 5041.57 | 4367.69 |
| 2018 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 4935.11 | 3531.43 | 4358.66 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 |
| 2019 | 4960.61 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 4438.92 | 5052.62 | 6014.24 | 6014.24 | 6014.24 | 5949.06 | 6014.24 |
| 2020 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5287.43 | 5634.67 | 6014.24 | 5274.79 | 6014.24 | 5153.71 | 6014.24 | 6014.24 |
| 2021 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 4342.31 | 6014.24 | 6014.24 |
| 2022 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 |
| 2023 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5853.27 | 4524.33 | 5202.09 | 4698.27 | 5466.87 | 5111.00 | 5340.51 | 6014.24 |
| 2024 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 3739.36 | 2666.65 | 3942.28 | 5071.94 | 6014.24 | 5591.44 | 2991.71 | 1021.60 |
| 2025 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5746.51 | 5826.84 | 5671.85 | 4687.59 | 5744.45 | 5986.46 | 6014.24 | 6014.24 |
| 2026 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5861.99 | 6014.24 | 6014.24 | 4998.86 | 5419.00 |
| 2027 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5767.94 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 6014.24 |
| 2028 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 5479.60 | 4609.74 | 5479.67 | 5648.46 | 6014.24 | 6014.24 | 6014.24 | 3339.00 |
| 2029 | 6014.24 | 6014.24 | 6014.24 | 6014.24 | 2426.17 | 4310.81 | 4625.57 | 5498.99 | 6014.24 | 4993.56 | 5949.06 | 6014.24 |

Tabla de energía producida

| AÑO | ENERGÍA (kWh) | | | | | | | | | | | |
|------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Sep | Oct | Nov | Dic |
| 1965 | 3,547,715 | 4,041,573 | 4,474,598 | 4,330,256 | 3,806,756 | 3,319,015 | 4,474,598 | 4,242,170 | 4,330,256 | 4,191,804 | 3,729,859 | 4,474,598 |
| 1966 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 3,075,983 | 4,330,256 | 4,394,606 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 |
| 1967 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,251,575 | 2,850,111 | 4,474,598 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,040,143 |
| 1968 | 4,474,598 | 3,338,199 | 4,474,598 | 4,330,256 | 2,329,323 | 2,665,624 | 3,155,468 | 3,773,522 | 4,151,379 | 3,254,507 | 3,506,938 | 2,879,504 |
| 1969 | 2,429,127 | 4,041,573 | 4,474,598 | 4,330,256 | 3,870,302 | 2,481,137 | 3,671,775 | 4,440,750 | 4,330,256 | 4,056,769 | 4,330,256 | 4,474,598 |
| 1970 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 4,087,711 | 4,474,598 | 4,474,598 | 4,330,256 | 4,474,598 | 4,214,138 | 4,474,598 |
| 1971 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 4,095,398 | 4,442,265 | 4,474,598 | 4,330,256 | 4,080,599 | 3,053,407 | 4,474,598 |
| 1972 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 | 4,474,598 | 4,330,256 | 4,474,598 | 3,061,094 | 4,474,598 |
| 1973 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 | 4,424,863 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 |
| 1974 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 3,044,210 | 4,330,256 | 4,474,598 | 4,474,598 | 4,330,256 | 4,474,598 | 3,460,816 | 3,956,039 |
| 1975 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 | 4,474,598 | 4,330,256 | 4,175,917 | 4,091,146 | 3,628,032 |
| 1976 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 3,409,597 | 3,980,093 | 4,474,598 | 4,474,598 | 4,330,256 | 3,754,928 | 2,730,555 | 4,474,598 |
| 1977 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 3,180,650 | 4,148,367 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 |
| 1978 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 3,592,290 | 3,288,267 | 3,655,889 | 4,329,545 | 4,330,256 | 4,474,598 | 3,253,268 | 4,474,598 |
| 1979 | 3,917,774 | 4,041,573 | 4,474,598 | 4,330,256 | 3,981,506 | 3,042,285 | 4,219,855 | 4,474,598 | 4,330,256 | 3,627,837 | 2,553,755 | 886,231 |
| 1980 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 3,369,881 | 3,449,693 | 3,743,264 | 3,439,908 | 4,330,256 | 4,088,542 | 4,330,256 | 4,474,598 |
| 1981 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,084,768 | 4,210,702 | 4,474,598 | 4,266,000 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 |
| 1982 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 3,080,719 | 4,267,515 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 |
| 1983 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 3,790,870 | 4,330,256 | 3,806,810 | 4,083,306 | 4,330,256 | 3,699,326 | 2,669,059 | 4,474,598 |
| 1984 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,037 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 |
| 1985 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 | 4,474,598 | 4,330,256 | 3,429,257 | 3,545,373 | 4,474,598 |
| 1986 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 | 4,474,598 | 4,330,256 | 4,358,610 | 3,622,242 | 4,474,598 |
| 1987 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 2,940,949 | 2,542,632 | 4,068,935 | 4,075,363 | 4,205,188 | 4,001,167 | 3,752,920 | 4,474,598 |
| 1988 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,331,060 | 3,860,897 | 4,289,745 | 3,953,508 | 2,315,460 | 2,702,884 |
| 1989 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 3,457,380 | 4,474,598 | 3,797,352 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 |
| 1990 | 4,474,598 | 4,041,573 | 4,474,598 | 3,884,169 | 1,535,004 | 4,264,511 | 3,219,014 | 3,797,352 | 4,330,256 | 4,350,667 | 4,330,256 | 4,474,598 |
| 1991 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 3,949,345 | 4,474,598 | 3,932,386 | 4,330,256 | 4,461,872 | 3,752,920 | 2,660,832 |
| 1992 | 4,474,598 | 2,548,161 | 4,474,598 | 4,330,256 | 2,718,539 | 2,227,467 | 3,361,991 | 3,805,295 | 3,797,779 | 4,310,951 | 2,446,138 | 1,777,737 |
| 1993 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 3,149,902 | 4,092,764 | 4,178,625 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 |
| 1994 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 | 4,474,598 | 4,330,256 | 4,112,372 | 4,330,256 | 4,474,598 |
| 1995 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 3,989,449 | 3,349,763 | 4,180,140 | 4,474,598 | 4,330,256 | 3,866,133 | 4,330,256 | 4,474,598 |
| 1996 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 3,695,676 | 4,132,480 | 4,474,598 | 4,330,256 | 3,961,451 | 3,960,468 | 3,426,182 |
| 1997 | 4,474,598 | 4,041,573 | 4,474,598 | 4,201,595 | 3,751,154 | 4,080,024 | 4,474,598 | 4,474,598 | 4,330,256 | 4,032,940 | 4,330,256 | 4,474,598 |
| 1998 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,076,825 | 3,226,772 | 4,378,719 | 4,226,284 | 4,330,256 | 4,247,406 | 3,737,546 | 2,744,937 |
| 1999 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 4,272,198 | 4,243,685 | 4,474,598 | 4,330,256 | 4,474,598 | 3,184,086 | 4,474,598 |
| 2000 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 |
| 2001 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 | 4,474,598 | 4,330,256 | 4,183,860 | 4,330,256 | 4,157,890 |
| 2002 | 4,010,289 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 3,126,841 | 4,474,598 | 4,474,598 | 4,330,256 | 4,263,292 | 4,330,256 | 4,474,598 |
| 2003 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 3,365,137 | 4,005,389 | 3,495,510 | 4,330,256 | 4,474,598 | 2,146,346 | 4,474,598 |
| 2004 | 2,673,030 | 4,041,573 | 4,474,598 | 4,330,256 | 3,417,540 | 2,427,328 | 4,474,598 | 3,559,056 | 3,928,458 | 3,897,906 | 4,330,256 | 4,474,598 |
| 2005 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 3,751,154 | 2,903,919 | 3,528,798 | 3,368,419 | 3,659,414 | 2,881,177 | 2,092,538 | 3,577,570 |
| 2006 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 3,680,302 | 4,370,776 | 4,474,598 | 4,330,256 | 4,080,599 | 4,183,390 | 4,474,598 |
| 2007 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 4,226,076 | 4,474,598 | 4,474,598 | 4,330,256 | 4,474,598 | 3,799,042 | 3,140,227 |
| 2008 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 3,616,120 | 2,634,876 | 4,108,651 | 4,242,170 | 3,774,718 | 2,833,518 | 2,753,616 | 3,602,801 |
| 2009 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 3,549,624 | 4,474,598 | 4,464,579 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 |
| 2010 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 | 4,474,598 | 4,330,256 | 3,731,099 | 4,330,256 | 4,474,598 |
| 2011 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 |
| 2012 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 3,188,337 | 4,180,140 | 3,686,147 | 4,320,492 | 3,961,451 | 3,483,877 | 4,474,598 |
| 2013 | 2,984,216 | 4,041,573 | 4,474,598 | 4,330,256 | 4,283,347 | 4,330,256 | 4,474,598 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 |
| 2014 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,458,151 | 4,266,000 | 4,330,256 | 3,882,019 | 2,876,607 | 4,474,598 |
| 2015 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 3,065,345 | 4,474,598 | 4,474,598 | 4,330,256 | 4,474,598 | 3,622,242 | 3,796,241 |
| 2016 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 4,256,824 | 4,474,598 | 4,474,598 | 4,330,256 | 4,096,485 | 2,761,303 | 2,526,265 |
| 2017 | 2,883,291 | 4,041,573 | 4,474,598 | 4,330,256 | 3,155,415 | 3,119,154 | 4,474,598 | 4,474,598 | 4,330,256 | 4,326,838 | 3,629,929 | 3,249,563 |
| 2018 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 3,671,722 | 2,542,632 | 3,242,843 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 |
| 2019 | 3,690,693 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 3,196,024 | 3,759,151 | 4,474,598 | 4,330,256 | 4,474,598 | 4,283,320 | 4,474,598 |
| 2020 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 3,933,847 | 4,056,963 | 4,474,598 | 3,924,443 | 4,330,256 | 3,834,360 | 4,330,256 | 4,474,598 |
| 2021 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 | 4,474,598 | 4,330,256 | 3,230,678 | 4,330,256 | 4,474,598 |
| 2022 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 |
| 2023 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,354,836 | 3,257,519 | 3,870,355 | 3,495,510 | 3,936,145 | 3,802,587 | 3,845,164 | 4,474,598 |
| 2024 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 2,782,085 | 1,919,989 | 2,933,059 | 3,773,522 | 4,330,256 | 4,160,031 | 2,154,033 | 760,074 |
| 2025 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,275,404 | 4,195,328 | 4,219,855 | 3,487,567 | 4,136,005 | 4,453,929 | 4,330,256 | 4,474,598 |
| 2026 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 | 4,361,318 | 4,330,256 | 4,474,598 | 3,599,181 | 4,031,733 |
| 2027 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,291,344 | 4,474,598 | 4,330,256 | 4,474,598 | 4,330,256 | 4,474,598 |
| 2028 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 4,076,825 | 3,319,015 | 4,076,878 | 4,202,454 | 4,330,256 | 4,474,598 | 4,330,256 | 2,484,213 |
| 2029 | 4,474,598 | 4,041,573 | 4,474,598 | 4,330,256 | 1,805,073 | 3,103,780 | 3,441,423 | 4,091,250 | 4,330,256 | 3,715,212 | 4,283,320 | 4,474,598 |

Factor de planta = 0.95

Cálculo del factor de planta $Q=1.38\text{m}^3/\text{s}$

1. Parámetros de entrada

| Parámetros de entrada | |
|------------------------------------|-------|
| Caudal (m ³ /s) | 1.38 |
| Longitud de Canal (m) | 7400 |
| Longitud de la tubería Forzada (m) | 735 |
| Pendiente del canal (m) | 0.001 |
| Diámetro de la tubería forzada (m) | 0.57 |

2. Cálculo de pérdidas de energía en la tubería forzada

| En la tubería forzada | |
|-------------------------------------|------------|
| Área del conducto (m ²) | 0.26 |
| Velocidad (m/s) | 5.41 |
| Re | 3082579.95 |
| f | 0.01 |
| Pérdida en el túnel (m) | 23.83 |

3. Cálculo de pérdidas de energía en el canal

| En el canal | EC. Bernoulli |
|---------------------|---------------|
| Pérdida en el canal | 7.400 |

4. Pérdida total, altura neta y potencia generada

| | |
|------------------------|--------|
| Pérdida total (m) | 31.23 |
| Altura neta (m) | 498.77 |
| Potencia generada (kW) | 5739.4 |

5. Tabla de caudales captados considerando el caudal ecológico

| AÑO | CAUDALES CONSIDERANDO EL CAUDAL ECOLÓGICO (m³/s) | | | | | | | | | | |
|------|--|------|------|------|------|------|------|------|------|------|------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Oct | Nov | Dic |
| 1965 | 1.14 | 4.10 | 3.81 | 1.67 | 1.23 | 1.10 | 1.44 | 1.37 | 1.35 | 1.24 | 1.51 |
| 1966 | 4.01 | 3.19 | 3.71 | 2.43 | 0.99 | 1.53 | 1.41 | 1.48 | 1.81 | 1.63 | 1.76 |
| 1967 | 1.49 | 7.76 | 7.21 | 2.42 | 1.37 | 0.95 | 1.63 | 1.92 | 2.31 | 1.78 | 1.30 |
| 1968 | 1.55 | 1.19 | 2.46 | 1.80 | 0.75 | 0.89 | 1.02 | 1.21 | 1.05 | 1.17 | 0.93 |
| 1969 | 0.78 | 2.36 | 3.14 | 3.13 | 1.25 | 0.83 | 1.18 | 1.43 | 1.31 | 1.46 | 4.15 |
| 1970 | 6.02 | 3.09 | 3.20 | 2.97 | 2.00 | 1.36 | 1.53 | 1.54 | 1.99 | 1.40 | 2.72 |
| 1971 | 3.67 | 4.90 | 7.02 | 3.94 | 1.79 | 1.36 | 1.43 | 1.66 | 1.31 | 1.02 | 1.83 |
| 1972 | 4.83 | 4.12 | 8.48 | 5.07 | 1.90 | 1.60 | 1.64 | 1.50 | 1.47 | 1.02 | 2.41 |
| 1973 | 5.27 | 7.28 | 7.00 | 5.56 | 2.04 | 1.54 | 1.66 | 1.42 | 1.83 | 1.90 | 3.40 |
| 1974 | 3.95 | 4.49 | 5.59 | 2.69 | 0.98 | 1.52 | 1.57 | 1.67 | 1.69 | 1.15 | 1.27 |
| 1975 | 2.27 | 2.46 | 6.61 | 2.86 | 1.74 | 1.46 | 1.48 | 1.58 | 1.34 | 1.36 | 1.17 |
| 1976 | 2.74 | 4.80 | 4.44 | 2.56 | 1.10 | 1.32 | 1.45 | 1.56 | 1.21 | 0.91 | 1.77 |
| 1977 | 1.65 | 6.12 | 3.89 | 2.34 | 1.64 | 1.06 | 1.34 | 1.47 | 1.56 | 2.19 | 1.91 |
| 1978 | 2.11 | 4.77 | 2.88 | 1.82 | 1.16 | 1.09 | 1.18 | 1.39 | 1.56 | 1.08 | 1.65 |
| 1979 | 1.26 | 4.64 | 6.15 | 3.04 | 1.28 | 1.01 | 1.36 | 1.46 | 1.17 | 0.85 | 0.29 |
| 1980 | 2.27 | 2.00 | 3.73 | 2.57 | 1.08 | 1.15 | 1.20 | 1.11 | 1.32 | 1.96 | 2.01 |
| 1981 | 2.70 | 7.45 | 6.07 | 2.68 | 1.31 | 1.40 | 1.62 | 1.37 | 1.79 | 1.90 | 2.52 |
| 1982 | 2.29 | 7.79 | 3.39 | 1.80 | 1.48 | 1.02 | 1.37 | 2.09 | 1.68 | 2.09 | 1.56 |
| 1983 | 2.39 | 1.48 | 3.77 | 3.75 | 1.22 | 1.47 | 1.23 | 1.31 | 1.19 | 0.89 | 1.79 |
| 1984 | 2.52 | 8.75 | 6.87 | 4.19 | 2.02 | 1.62 | 1.44 | 1.50 | 1.91 | 1.60 | 3.45 |
| 1985 | 2.06 | 3.63 | 5.04 | 3.95 | 1.78 | 1.60 | 1.73 | 1.46 | 1.10 | 1.18 | 2.24 |
| 1986 | 4.60 | 5.11 | 6.85 | 5.15 | 2.35 | 1.83 | 1.68 | 1.53 | 1.40 | 1.20 | 1.71 |
| 1987 | 4.75 | 4.86 | 3.17 | 1.67 | 0.95 | 0.85 | 1.31 | 1.31 | 1.29 | 1.25 | 2.30 |
| 1988 | 3.87 | 5.54 | 3.43 | 4.01 | 1.73 | 1.45 | 1.39 | 1.24 | 1.27 | 0.77 | 0.87 |
| 1989 | 4.13 | 6.43 | 6.05 | 4.11 | 1.80 | 1.15 | 1.49 | 1.22 | 1.59 | 1.56 | 1.88 |
| 1990 | 2.64 | 1.58 | 1.88 | 1.29 | 0.49 | 1.42 | 1.04 | 1.22 | 1.40 | 2.86 | 2.34 |
| 1991 | 2.09 | 2.64 | 5.23 | 2.42 | 1.80 | 1.31 | 1.53 | 1.27 | 1.44 | 1.25 | 0.86 |
| 1992 | 1.56 | 0.91 | 2.48 | 1.77 | 0.87 | 0.74 | 1.08 | 1.22 | 1.39 | 0.81 | 0.57 |
| 1993 | 2.13 | 4.18 | 5.11 | 3.48 | 1.85 | 1.05 | 1.32 | 1.34 | 1.65 | 2.95 | 4.17 |
| 1994 | 4.88 | 5.44 | 5.37 | 5.33 | 2.63 | 2.00 | 1.66 | 1.55 | 1.32 | 1.58 | 1.70 |
| 1995 | 2.64 | 2.30 | 3.77 | 3.54 | 1.28 | 1.11 | 1.35 | 1.45 | 1.24 | 1.62 | 2.10 |
| 1996 | 3.72 | 5.75 | 5.17 | 3.71 | 1.60 | 1.23 | 1.33 | 1.57 | 1.27 | 1.32 | 1.10 |
| 1997 | 2.25 | 4.51 | 2.97 | 1.40 | 1.21 | 1.36 | 1.70 | 1.73 | 1.30 | 1.68 | 2.71 |
| 1998 | 4.95 | 5.20 | 4.88 | 2.78 | 1.31 | 1.07 | 1.41 | 1.36 | 1.37 | 1.24 | 0.88 |
| 1999 | 1.58 | 4.98 | 4.84 | 3.78 | 2.29 | 1.42 | 1.37 | 1.60 | 1.50 | 1.06 | 2.72 |
| 2000 | 4.43 | 6.03 | 5.55 | 2.80 | 2.29 | 1.50 | 1.79 | 1.55 | 2.12 | 1.59 | 2.68 |
| 2001 | 6.22 | 5.23 | 5.84 | 3.83 | 2.36 | 1.62 | 1.73 | 1.79 | 1.35 | 1.77 | 1.34 |
| 2002 | 1.29 | 3.39 | 5.31 | 3.38 | 1.44 | 1.04 | 1.46 | 1.63 | 1.37 | 1.93 | 2.44 |
| 2003 | 4.06 | 4.55 | 5.38 | 3.57 | 1.47 | 1.12 | 1.29 | 1.12 | 1.54 | 0.71 | 1.77 |
| 2004 | 0.86 | 3.58 | 3.23 | 2.71 | 1.10 | 0.81 | 1.51 | 1.15 | 1.25 | 2.13 | 3.12 |
| 2005 | 3.88 | 3.74 | 4.92 | 3.90 | 1.21 | 0.97 | 1.14 | 1.08 | 0.93 | 0.70 | 1.15 |
| 2006 | 2.83 | 4.19 | 5.68 | 4.63 | 1.53 | 1.22 | 1.41 | 1.54 | 1.31 | 1.39 | 2.37 |
| 2007 | 4.56 | 4.81 | 5.82 | 4.31 | 1.84 | 1.41 | 1.46 | 1.60 | 1.60 | 1.26 | 1.01 |
| 2008 | 4.33 | 5.60 | 4.58 | 2.74 | 1.16 | 0.88 | 1.32 | 1.37 | 0.91 | 0.92 | 1.16 |
| 2009 | 3.49 | 6.71 | 5.79 | 3.45 | 1.57 | 1.18 | 1.50 | 1.44 | 1.78 | 3.07 | 4.49 |
| 2010 | 7.15 | 4.29 | 4.65 | 4.01 | 1.71 | 1.91 | 1.84 | 1.58 | 1.20 | 1.54 | 2.75 |
| 2011 | 3.64 | 6.61 | 8.03 | 6.12 | 2.42 | 1.60 | 1.65 | 1.56 | 2.01 | 1.78 | 1.47 |
| 2012 | 3.37 | 6.49 | 5.47 | 4.49 | 1.73 | 1.06 | 1.35 | 1.19 | 1.27 | 1.16 | 2.51 |
| 2013 | 0.96 | 6.77 | 6.79 | 2.88 | 1.38 | 1.53 | 1.67 | 1.78 | 1.93 | 1.69 | 2.83 |
| 2014 | 3.51 | 3.79 | 5.41 | 3.18 | 1.71 | 1.75 | 1.43 | 1.37 | 1.25 | 0.96 | 1.68 |
| 2015 | 3.94 | 4.51 | 5.27 | 3.47 | 1.91 | 1.02 | 1.64 | 1.48 | 1.59 | 1.20 | 1.22 |
| 2016 | 2.38 | 1.58 | 3.76 | 2.66 | 1.73 | 1.42 | 1.87 | 1.51 | 1.32 | 0.92 | 0.81 |
| 2017 | 0.93 | 2.46 | 4.14 | 1.91 | 1.02 | 1.04 | 1.55 | 1.73 | 1.39 | 1.21 | 1.05 |
| 2018 | 3.13 | 4.54 | 3.12 | 2.52 | 1.18 | 0.85 | 1.04 | 1.59 | 1.86 | 1.54 | 3.61 |
| 2019 | 1.19 | 4.59 | 3.29 | 2.26 | 1.59 | 1.06 | 1.21 | 1.49 | 1.44 | 1.42 | 2.14 |
| 2020 | 1.66 | 4.93 | 3.01 | 2.91 | 1.27 | 1.35 | 1.50 | 1.26 | 1.23 | 1.66 | 3.13 |
| 2021 | 2.84 | 3.70 | 4.55 | 4.62 | 2.30 | 1.76 | 1.85 | 1.47 | 1.04 | 1.52 | 2.78 |
| 2022 | 2.37 | 4.13 | 2.91 | 3.57 | 2.01 | 2.08 | 1.86 | 2.02 | 2.23 | 3.39 | 4.22 |
| 2023 | 6.12 | 2.07 | 4.39 | 2.41 | 1.40 | 1.08 | 1.25 | 1.12 | 1.22 | 1.28 | 2.14 |
| 2024 | 2.99 | 4.99 | 5.78 | 2.39 | 0.90 | 0.64 | 0.94 | 1.21 | 1.34 | 0.72 | 0.24 |
| 2025 | 2.35 | 5.41 | 4.02 | 1.85 | 1.38 | 1.40 | 1.36 | 1.12 | 1.43 | 1.70 | 1.51 |
| 2026 | 4.17 | 5.80 | 5.50 | 3.06 | 1.88 | 1.51 | 1.53 | 1.40 | 1.70 | 1.20 | 1.30 |
| 2027 | 2.60 | 5.61 | 9.23 | 5.03 | 2.35 | 1.47 | 1.38 | 1.64 | 2.02 | 2.33 | 1.86 |
| 2028 | 1.52 | 2.90 | 3.91 | 2.23 | 1.31 | 1.10 | 1.31 | 1.35 | 1.55 | 1.48 | 0.80 |
| 2029 | 1.95 | 1.59 | 2.21 | 1.67 | 0.58 | 1.03 | 1.11 | 1.32 | 1.20 | 1.42 | 3.31 |

6. Tabla de caudales turbinables

| AÑO | CAUDALES TURBINABLES (m³/s) | | | | | | | | | | | |
|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Sep | Oct | Nov | Dic |
| 1965 | 1.14 | 1.38 | 1.38 | 1.38 | 1.23 | 1.10 | 1.38 | 1.37 | 1.38 | 1.35 | 1.24 | 1.38 |
| 1966 | 1.38 | 1.38 | 1.38 | 1.38 | 0.99 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 |
| 1967 | 1.38 | 1.38 | 1.38 | 1.38 | 1.37 | 0.95 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.30 |
| 1968 | 1.38 | 1.19 | 1.38 | 1.38 | 0.75 | 0.89 | 1.02 | 1.21 | 1.38 | 1.05 | 1.17 | 0.93 |
| 1969 | 0.78 | 1.38 | 1.38 | 1.38 | 1.25 | 0.83 | 1.18 | 1.38 | 1.38 | 1.31 | 1.38 | 1.38 |
| 1970 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.36 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 |
| 1971 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.36 | 1.38 | 1.38 | 1.38 | 1.31 | 1.02 | 1.38 |
| 1972 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.02 | 1.38 |
| 1973 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 |
| 1974 | 1.38 | 1.38 | 1.38 | 1.38 | 0.98 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.15 | 1.27 |
| 1975 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.34 | 1.36 | 1.17 |
| 1976 | 1.38 | 1.38 | 1.38 | 1.38 | 1.10 | 1.32 | 1.38 | 1.38 | 1.38 | 1.21 | 0.91 | 1.38 |
| 1977 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.06 | 1.34 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 |
| 1978 | 1.38 | 1.38 | 1.38 | 1.38 | 1.16 | 1.09 | 1.18 | 1.38 | 1.38 | 1.38 | 1.08 | 1.38 |
| 1979 | 1.26 | 1.38 | 1.38 | 1.38 | 1.28 | 1.01 | 1.36 | 1.38 | 1.38 | 1.17 | 0.85 | 0.29 |
| 1980 | 1.38 | 1.38 | 1.38 | 1.38 | 1.08 | 1.15 | 1.20 | 1.11 | 1.38 | 1.32 | 1.38 | 1.38 |
| 1981 | 1.38 | 1.38 | 1.38 | 1.38 | 1.31 | 1.38 | 1.38 | 1.37 | 1.38 | 1.38 | 1.38 | 1.38 |
| 1982 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.02 | 1.37 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 |
| 1983 | 1.38 | 1.38 | 1.38 | 1.38 | 1.22 | 1.38 | 1.23 | 1.31 | 1.38 | 1.19 | 0.89 | 1.38 |
| 1984 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 |
| 1985 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.10 | 1.18 | 1.38 |
| 1986 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.20 | 1.38 |
| 1987 | 1.38 | 1.38 | 1.38 | 1.38 | 0.95 | 0.85 | 1.31 | 1.31 | 1.38 | 1.29 | 1.25 | 1.38 |
| 1988 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.24 | 1.38 | 1.27 | 0.77 | 0.87 |
| 1989 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.15 | 1.38 | 1.22 | 1.38 | 1.38 | 1.38 | 1.38 |
| 1990 | 1.38 | 1.38 | 1.38 | 1.29 | 0.49 | 1.38 | 1.04 | 1.22 | 1.38 | 1.38 | 1.38 | 1.38 |
| 1991 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.31 | 1.38 | 1.27 | 1.38 | 1.38 | 1.25 | 0.86 |
| 1992 | 1.38 | 0.91 | 1.38 | 1.38 | 0.87 | 0.74 | 1.08 | 1.22 | 1.26 | 1.38 | 0.81 | 0.57 |
| 1993 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.05 | 1.32 | 1.34 | 1.38 | 1.38 | 1.38 | 1.38 |
| 1994 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.32 | 1.38 | 1.38 |
| 1995 | 1.38 | 1.38 | 1.38 | 1.38 | 1.28 | 1.11 | 1.35 | 1.38 | 1.38 | 1.24 | 1.38 | 1.38 |
| 1996 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.23 | 1.33 | 1.38 | 1.38 | 1.27 | 1.32 | 1.10 |
| 1997 | 1.38 | 1.38 | 1.38 | 1.38 | 1.21 | 1.36 | 1.38 | 1.38 | 1.38 | 1.30 | 1.38 | 1.38 |
| 1998 | 1.38 | 1.38 | 1.38 | 1.38 | 1.31 | 1.07 | 1.38 | 1.36 | 1.38 | 1.37 | 1.24 | 0.88 |
| 1999 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.37 | 1.38 | 1.38 | 1.38 | 1.06 | 1.38 |
| 2000 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 |
| 2001 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.35 | 1.38 | 1.34 |
| 2002 | 1.29 | 1.38 | 1.38 | 1.38 | 1.38 | 1.04 | 1.38 | 1.38 | 1.38 | 1.37 | 1.38 | 1.38 |
| 2003 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.12 | 1.29 | 1.12 | 1.38 | 1.38 | 0.71 | 1.38 |
| 2004 | 0.86 | 1.38 | 1.38 | 1.38 | 1.10 | 0.81 | 1.38 | 1.15 | 1.31 | 1.25 | 1.38 | 1.38 |
| 2005 | 1.38 | 1.38 | 1.38 | 1.38 | 1.21 | 0.97 | 1.14 | 1.08 | 1.22 | 0.93 | 0.70 | 1.15 |
| 2006 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.22 | 1.38 | 1.38 | 1.38 | 1.31 | 1.38 | 1.38 |
| 2007 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.26 | 1.01 |
| 2008 | 1.38 | 1.38 | 1.38 | 1.38 | 1.16 | 0.88 | 1.32 | 1.37 | 1.26 | 0.91 | 0.92 | 1.16 |
| 2009 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.18 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 |
| 2010 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.20 | 1.38 | 1.38 |
| 2011 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 |
| 2012 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.06 | 1.35 | 1.19 | 1.38 | 1.27 | 1.16 | 1.38 |
| 2013 | 0.96 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 |
| 2014 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.37 | 1.38 | 1.25 | 0.96 | 1.38 |
| 2015 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.02 | 1.38 | 1.38 | 1.38 | 1.38 | 1.20 | 1.22 |
| 2016 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.32 | 0.92 | 0.81 |
| 2017 | 0.93 | 1.38 | 1.38 | 1.38 | 1.02 | 1.04 | 1.38 | 1.38 | 1.38 | 1.38 | 1.21 | 1.05 |
| 2018 | 1.38 | 1.38 | 1.38 | 1.38 | 1.18 | 0.85 | 1.04 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 |
| 2019 | 1.19 | 1.38 | 1.38 | 1.38 | 1.38 | 1.06 | 1.21 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 |
| 2020 | 1.38 | 1.38 | 1.38 | 1.38 | 1.27 | 1.35 | 1.38 | 1.26 | 1.38 | 1.23 | 1.38 | 1.38 |
| 2021 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.04 | 1.38 | 1.38 |
| 2022 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 |
| 2023 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.08 | 1.25 | 1.12 | 1.31 | 1.22 | 1.28 | 1.38 |
| 2024 | 1.38 | 1.38 | 1.38 | 1.38 | 0.90 | 0.64 | 0.94 | 1.21 | 1.38 | 1.34 | 0.72 | 0.24 |
| 2025 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.36 | 1.12 | 1.38 | 1.38 | 1.38 | 1.38 |
| 2026 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.20 | 1.30 |
| 2027 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 | 1.38 |
| 2028 | 1.38 | 1.38 | 1.38 | 1.38 | 1.31 | 1.10 | 1.31 | 1.35 | 1.38 | 1.38 | 1.38 | 0.80 |
| 2029 | 1.38 | 1.38 | 1.38 | 1.38 | 0.58 | 1.03 | 1.11 | 1.32 | 1.38 | 1.20 | 1.38 | 1.38 |

Los caudales turbinables se obtuvieron bajo la condición: si $Q_{captado} > Q_{diseño}$ entonces el caudal turbinable será el $Q_{diseño}$. En caso contrario será el $Q_{captado}$.

7. Tabla de potencias efectivas

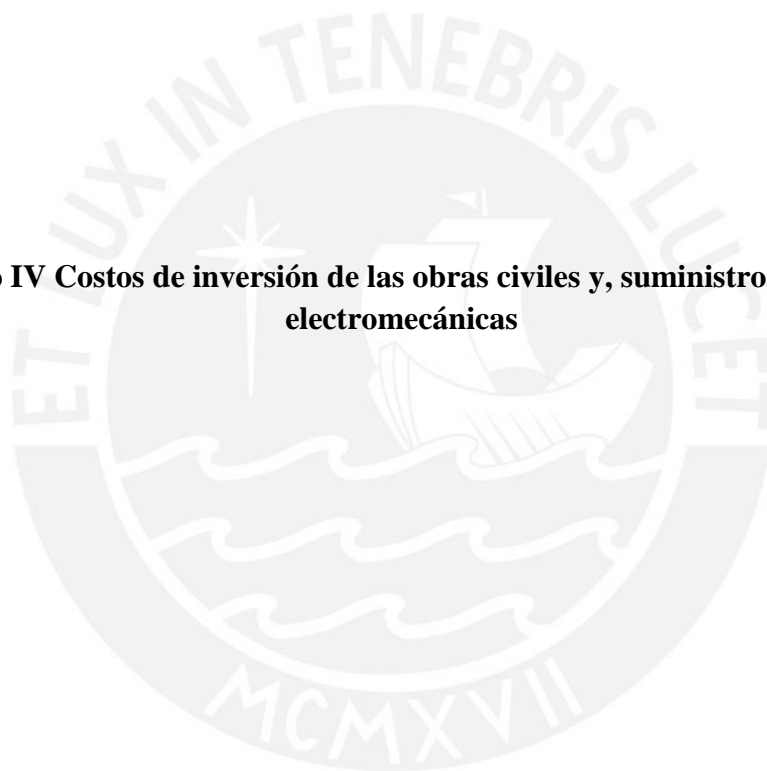
| AÑO | POTENCIAS EFECTIVAS (kW) | | | | | | | | | | | |
|------|--------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Sep | Oct | Nov | Dic |
| 1965 | 4748.38 | 5739.41 | 5739.41 | 5739.41 | 5095.09 | 4590.36 | 5739.41 | 5677.86 | 5739.41 | 5610.45 | 5158.57 | 5739.41 |
| 1966 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4117.00 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 |
| 1967 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5690.45 | 3941.84 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5407.46 |
| 1968 | 5739.41 | 4946.67 | 5739.41 | 5739.41 | 3117.64 | 3686.68 | 4223.38 | 5050.61 | 5739.41 | 4355.94 | 4850.26 | 3854.02 |
| 1969 | 3251.22 | 5739.41 | 5739.41 | 5739.41 | 5180.14 | 3431.53 | 4914.43 | 5739.41 | 5739.41 | 5429.71 | 5739.41 | 5739.41 |
| 1970 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5653.50 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 |
| 1971 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5664.13 | 5739.41 | 5739.41 | 5739.41 | 5461.61 | 4223.01 | 5739.41 |
| 1972 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4233.64 | 5739.41 |
| 1973 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 |
| 1974 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4074.47 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4786.47 | 5294.89 |
| 1975 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5589.19 | 5658.25 | 4855.88 |
| 1976 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4563.52 | 5504.66 | 5739.41 | 5739.41 | 5739.41 | 5025.72 | 3776.49 | 5739.41 |
| 1977 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4398.99 | 5552.31 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 |
| 1978 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4808.04 | 4547.83 | 4893.16 | 5739.41 | 5739.41 | 5739.41 | 4499.42 | 5739.41 |
| 1979 | 5243.68 | 5739.41 | 5739.41 | 5739.41 | 5328.98 | 4207.62 | 5647.99 | 5739.41 | 5739.41 | 4855.62 | 3531.96 | 1186.16 |
| 1980 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4510.36 | 4771.09 | 5010.11 | 4604.09 | 5739.41 | 5472.24 | 5739.41 | 5739.41 |
| 1981 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5467.19 | 5739.41 | 5739.41 | 5709.75 | 5739.41 | 5739.41 | 5739.41 | 5739.41 |
| 1982 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4260.78 | 5711.78 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 |
| 1983 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5073.83 | 5739.41 | 5095.16 | 5465.23 | 5739.41 | 4951.30 | 3691.44 | 5739.41 |
| 1984 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 |
| 1985 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4589.83 | 4903.42 | 5739.41 |
| 1986 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5009.73 | 5739.41 |
| 1987 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 3936.26 | 3516.58 | 5446.00 | 5454.60 | 5739.41 | 5355.29 | 5190.47 | 5739.41 |
| 1988 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5167.55 | 5739.41 | 5291.51 | 3202.39 | 3617.63 |
| 1989 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4781.72 | 5739.41 | 5082.50 | 5739.41 | 5739.41 | 5739.41 | 5739.41 |
| 1990 | 5739.41 | 5739.41 | 5739.41 | 5371.99 | 2054.50 | 5739.41 | 4308.43 | 5082.50 | 5739.41 | 5739.41 | 5739.41 | 5739.41 |
| 1991 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5462.13 | 5739.41 | 5263.24 | 5739.41 | 5739.41 | 5190.47 | 3561.35 |
| 1992 | 5739.41 | 3775.96 | 5739.41 | 5739.41 | 3638.58 | 3080.69 | 4499.80 | 5093.13 | 5252.51 | 5739.41 | 3383.12 | 2379.38 |
| 1993 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4356.46 | 5477.89 | 5592.81 | 5739.41 | 5739.41 | 5739.41 | 5739.41 |
| 1994 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5504.13 | 5739.41 | 5739.41 |
| 1995 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5339.61 | 4632.88 | 5594.84 | 5739.41 | 5739.41 | 5174.56 | 5739.41 | 5739.41 |
| 1996 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5111.30 | 5531.05 | 5739.41 | 5739.41 | 5302.14 | 5477.52 | 4585.71 |
| 1997 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5020.67 | 5642.87 | 5739.41 | 5739.41 | 5739.41 | 5397.82 | 5739.41 | 5739.41 |
| 1998 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5456.56 | 4462.78 | 5739.41 | 5656.60 | 5739.41 | 5684.87 | 5169.20 | 3673.91 |
| 1999 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5679.89 | 5739.41 | 5739.41 | 5739.41 | 4403.74 | 5739.41 |
| 2000 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 |
| 2001 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5599.82 | 5739.41 | 5565.06 |
| 2002 | 5367.50 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4324.57 | 5739.41 | 5739.41 | 5739.41 | 5706.13 | 5739.41 | 5739.41 |
| 2003 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4654.14 | 5360.95 | 4678.51 | 5739.41 | 5739.41 | 2968.50 | 5739.41 |
| 2004 | 3577.67 | 5739.41 | 5739.41 | 5739.41 | 4574.15 | 3357.11 | 5739.41 | 4763.56 | 5433.24 | 5217.09 | 5739.41 | 5739.41 |
| 2005 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5020.67 | 4016.26 | 4723.06 | 4508.40 | 5061.14 | 3856.26 | 2894.08 | 4788.34 |
| 2006 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5090.03 | 5739.41 | 5739.41 | 5739.41 | 5461.61 | 5739.41 | 5739.41 |
| 2007 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5254.26 | 4202.98 |
| 2008 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4839.93 | 3644.16 | 5499.15 | 5677.86 | 5220.61 | 3792.47 | 3808.38 | 4822.11 |
| 2009 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4909.30 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 |
| 2010 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4993.83 | 5739.41 | 5739.41 |
| 2011 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 |
| 2012 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4409.62 | 5594.84 | 4933.66 | 5739.41 | 5302.14 | 4818.37 | 5739.41 |
| 2013 | 3994.17 | 5739.41 | 5739.41 | 5739.41 | 5732.97 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 |
| 2014 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5709.75 | 5739.41 | 5195.82 | 3978.48 | 5739.41 |
| 2015 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4239.52 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5009.73 | 5081.01 |
| 2016 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5482.87 | 3819.01 | 3381.24 |
| 2017 | 3859.09 | 5739.41 | 5739.41 | 5739.41 | 4223.31 | 4313.94 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5020.36 | 4349.32 |
| 2018 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4914.35 | 3516.58 | 4340.33 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 |
| 2019 | 4939.74 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4420.25 | 5031.37 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 |
| 2020 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5265.19 | 5610.97 | 5739.41 | 5252.60 | 5739.41 | 5132.03 | 5739.41 | 5739.41 |
| 2021 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4324.05 | 5739.41 | 5739.41 |
| 2022 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 |
| 2023 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4505.30 | 5180.21 | 4678.51 | 5443.87 | 5089.51 | 5318.04 | 5739.41 |
| 2024 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 3723.63 | 2655.44 | 3925.70 | 5050.61 | 5739.41 | 5567.92 | 2979.13 | 1017.31 |
| 2025 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5722.34 | 5739.41 | 5647.99 | 4667.88 | 5720.29 | 5739.41 | 5739.41 | 5739.41 |
| 2026 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 4977.84 | 5396.20 |
| 2027 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5739.41 |
| 2028 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 5456.56 | 4590.36 | 5456.63 | 5624.70 | 5739.41 | 5739.41 | 5739.41 | 3324.95 |
| 2029 | 5739.41 | 5739.41 | 5739.41 | 5739.41 | 2415.97 | 4292.68 | 4606.11 | 5475.86 | 5739.41 | 4972.56 | 5739.41 | 5739.41 |

8. Tabla de energía producida

| AÑO | ENERGÍA (kWh) | | | | | | | | | | | |
|------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | Ene | Feb | Mar | Abr | May | Jun | Jul | Ago | Sep | Oct | Nov | Dic |
| 1965 | 3,532,794 | 3,856,884 | 4,270,122 | 4,132,376 | 3,790,746 | 3,305,056 | 4,270,122 | 4,224,328 | 4,132,376 | 4,174,174 | 3,714,172 | 4,270,122 |
| 1966 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,063,046 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 1967 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,233,693 | 2,838,124 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,023,151 |
| 1968 | 4,270,122 | 3,324,160 | 4,270,122 | 4,132,376 | 2,319,526 | 2,654,413 | 3,142,197 | 3,757,651 | 4,132,376 | 3,240,819 | 3,492,188 | 2,867,393 |
| 1969 | 2,418,911 | 3,856,884 | 4,270,122 | 4,132,376 | 3,854,024 | 2,470,702 | 3,656,333 | 4,270,122 | 4,132,376 | 4,039,707 | 4,132,376 | 4,270,122 |
| 1970 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,070,519 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 1971 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,078,173 | 4,270,122 | 4,270,122 | 4,132,376 | 4,063,437 | 3,040,565 | 4,270,122 |
| 1972 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 3,048,220 | 4,270,122 |
| 1973 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 1974 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,031,407 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 3,446,260 | 3,939,401 |
| 1975 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,158,354 | 4,073,940 | 3,612,773 |
| 1976 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,395,257 | 3,963,354 | 4,270,122 | 4,270,122 | 4,132,376 | 3,739,136 | 2,719,071 | 4,270,122 |
| 1977 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,167,273 | 4,130,920 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 1978 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,577,182 | 3,274,437 | 3,640,513 | 4,270,122 | 4,132,376 | 4,270,122 | 3,239,586 | 4,270,122 |
| 1979 | 3,901,297 | 3,856,884 | 4,270,122 | 4,132,376 | 3,964,761 | 3,029,489 | 4,202,108 | 4,270,122 | 4,132,376 | 3,612,579 | 2,543,015 | 882,503 |
| 1980 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,355,708 | 3,435,185 | 3,727,521 | 3,425,440 | 4,132,376 | 4,071,346 | 4,132,376 | 4,270,122 |
| 1981 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,067,588 | 4,132,376 | 4,270,122 | 4,248,058 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 1982 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,067,762 | 4,249,566 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 1983 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,774,926 | 4,132,376 | 3,790,799 | 4,066,133 | 4,132,376 | 3,683,767 | 2,657,834 | 4,270,122 |
| 1984 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 1985 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 3,414,835 | 3,530,461 | 4,270,122 |
| 1986 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 3,607,008 | 4,270,122 |
| 1987 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 2,928,580 | 2,531,939 | 4,051,822 | 4,058,223 | 4,132,376 | 3,984,339 | 3,737,136 | 4,270,122 |
| 1988 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 3,844,659 | 4,132,376 | 3,936,880 | 2,305,721 | 2,691,517 |
| 1989 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,442,839 | 4,270,122 | 3,781,381 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 1990 | 4,270,122 | 3,856,884 | 4,270,122 | 3,867,833 | 1,528,548 | 4,132,376 | 3,205,475 | 3,781,381 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 1991 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,932,735 | 4,270,122 | 3,915,847 | 4,132,376 | 4,270,122 | 3,737,136 | 2,649,641 |
| 1992 | 4,270,122 | 2,537,444 | 4,270,122 | 4,132,376 | 2,707,106 | 2,218,099 | 3,347,851 | 3,789,290 | 3,781,807 | 4,270,122 | 2,435,850 | 1,770,260 |
| 1993 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,136,654 | 4,075,551 | 4,161,050 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 1994 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,095,076 | 4,132,376 | 4,270,122 |
| 1995 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,972,671 | 3,335,674 | 4,162,559 | 4,270,122 | 4,132,376 | 3,849,873 | 4,132,376 | 4,270,122 |
| 1996 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,680,133 | 4,115,100 | 4,270,122 | 4,132,376 | 3,944,790 | 3,943,811 | 3,411,772 |
| 1997 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,735,377 | 4,062,864 | 4,270,122 | 4,270,122 | 4,132,376 | 4,015,978 | 4,132,376 | 4,270,122 |
| 1998 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,059,678 | 3,213,200 | 4,270,122 | 4,208,509 | 4,132,376 | 4,229,542 | 3,721,827 | 2,733,392 |
| 1999 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,225,837 | 4,270,122 | 4,132,376 | 4,270,122 | 3,170,694 | 4,270,122 |
| 2000 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 2001 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,166,264 | 4,132,376 | 4,140,402 |
| 2002 | 3,993,423 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,113,690 | 4,270,122 | 4,270,122 | 4,132,376 | 4,245,362 | 4,132,376 | 4,270,122 |
| 2003 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,350,984 | 3,988,544 | 3,480,809 | 4,132,376 | 4,270,122 | 2,137,319 | 4,270,122 |
| 2004 | 2,661,788 | 3,856,884 | 4,270,122 | 4,132,376 | 3,403,166 | 2,417,119 | 4,270,122 | 3,544,087 | 3,911,935 | 3,881,512 | 4,132,376 | 4,270,122 |
| 2005 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,735,377 | 2,891,706 | 3,513,957 | 3,354,252 | 3,644,023 | 2,869,060 | 2,083,737 | 3,562,523 |
| 2006 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,664,823 | 4,270,122 | 4,270,122 | 4,132,376 | 4,063,437 | 4,132,376 | 4,270,122 |
| 2007 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 3,783,064 | 3,127,020 |
| 2008 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,600,911 | 2,623,794 | 4,091,371 | 4,224,328 | 3,758,843 | 2,821,601 | 2,742,035 | 3,587,648 |
| 2009 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,534,695 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 2010 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 3,715,406 | 4,132,376 | 4,270,122 |
| 2011 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 2012 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,174,927 | 4,162,559 | 3,670,644 | 4,132,376 | 3,944,790 | 3,469,224 | 4,270,122 |
| 2013 | 2,971,665 | 3,856,884 | 4,270,122 | 4,132,376 | 4,265,332 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 2014 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,248,058 | 4,132,376 | 3,865,692 | 2,864,509 | 4,270,122 |
| 2015 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,052,453 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 3,607,008 | 3,780,275 |
| 2016 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,079,256 | 2,749,689 | 2,515,640 |
| 2017 | 2,871,164 | 3,856,884 | 4,270,122 | 4,132,376 | 3,142,144 | 3,106,036 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 3,614,662 | 3,235,896 |
| 2018 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,656,279 | 2,531,939 | 3,229,205 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 2019 | 3,675,170 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,182,582 | 3,743,340 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 2020 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,917,302 | 4,039,900 | 4,270,122 | 3,907,937 | 4,132,376 | 3,818,233 | 4,132,376 | 4,270,122 |
| 2021 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 3,217,090 | 4,132,376 | 4,270,122 |
| 2022 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 2023 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,243,819 | 3,854,077 | 3,480,809 | 3,919,590 | 3,786,594 | 3,828,992 | 4,270,122 |
| 2024 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 2,770,384 | 1,911,914 | 2,920,723 | 3,757,651 | 4,132,376 | 4,142,534 | 2,144,974 | 756,877 |
| 2025 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,257,423 | 4,132,376 | 4,202,108 | 3,472,899 | 4,118,610 | 4,270,122 | 4,132,376 | 4,270,122 |
| 2026 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 3,584,044 | 4,014,776 |
| 2027 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 2028 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,059,678 | 3,305,056 | 4,059,732 | 4,184,779 | 4,132,376 | 4,270,122 | 4,132,376 | 2,473,765 |
| 2029 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 1,797,481 | 3,090,726 | 3,426,949 | 4,074,043 | 4,132,376 | 3,699,587 | 4,132,376 | 4,270,122 |

Factor de planta = 0.96

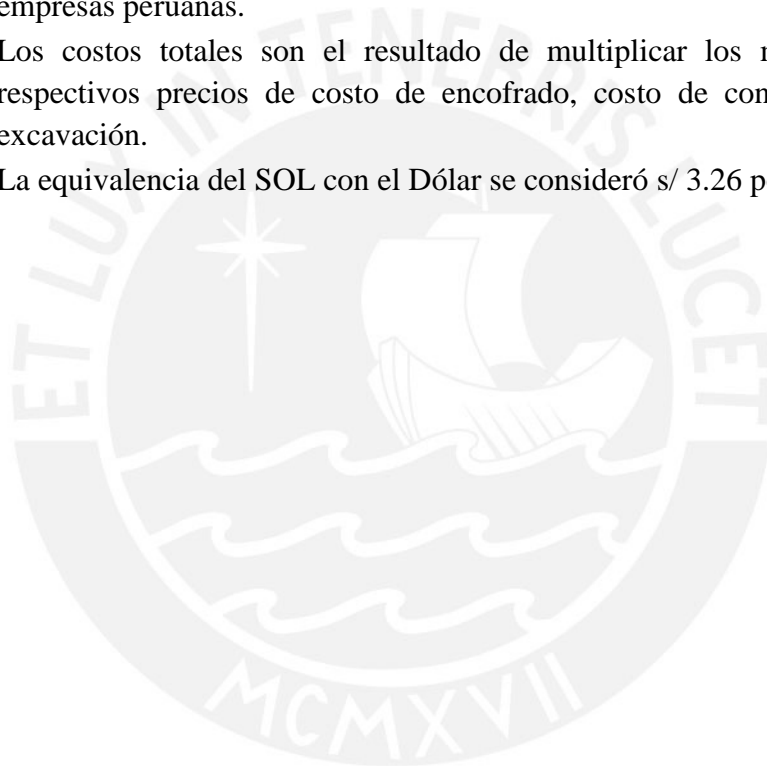
**Anexo IV Costos de inversión de las obras civiles y, suministros y obras
electromecánicas**



Obras civiles

La metodología aplicada en la elaboración del presupuesto es la siguiente:

- Determinación de componentes principales, según el cual se estructura el presupuesto.
- Cálculo de metrados para obtener las dimensiones, volumen de excavación, volumen de concreto según las curvas paramétricas propuestas en la tesis Planeamiento para el diseño de pequeñas centrales hidroeléctricas en el Perú, aplicación a la pequeña central de Cutervo (Mellado, 1982). Éstas se encuentran en el Anexo VI Curvas paramétricas.
- Los precios de las obras civiles se obtuvieron por medio de ratios de costos de proyectos similares de minicentrales hidroeléctricas desarrolladas por empresas peruanas.
- Los costos totales son el resultado de multiplicar los metrados con los respectivos precios de costo de encofrado, costo de concreto y costo de excavación.
- La equivalencia del SOL con el Dólar se consideró s/ 3.26 por dólar.



1. Tabla de volumen de concreto, volumen de excavación y área de encofrado de la bocatoma

| OBRAS DE CAPTACIÓN - BOCATOMA | Altura (m) | 4062 | | | | | | |
|---|------------|-------|--------|--------|--------|--------|-------|--|
| | 50% | 75% | 90% | 95% | | | | |
| Caudal de diseño Q (m3/s) | 1.71 | 1.47 | 1.44 | 1.38 | 1.5 | 1.55 | 1.6 | |
| Tirante de canal de aducción (h) (m) Lámina 5.26.1 | 0.95 | 0.89 | 0.88 | 0.85 | 0.90 | 0.91 | 0.93 | |
| Bocatoma Tipo Estándar Láminas 5.12, 5.4.1 | | | | | | | | |
| Caudal de diseño Q (m3/s) | 1.71 | 1.47 | 1.44 | 1.38 | 1.5 | 1.55 | 1.6 | |
| Ancho X de ventada de captación(B1) (m) 5.4.1 | 1.43 | 1.37 | 1.36 | 1.34 | 1.37 | 1.39 | 1.40 | |
| Altura de la ventana de captación (H) (m) 5.4.1 | 0.93 | 0.87 | 0.86 | 0.85 | 0.88 | 0.89 | 0.90 | |
| Altura del canal en la compuerta(Ho) (m) 5.4.1 | 1.13 | 1.04 | 1.02 | 0.99 | 1.05 | 1.08 | 1.10 | |
| Altura de la cresta del barraje H = 3*h | 3.05 | 2.87 | 2.84 | 2.75 | 2.90 | 2.93 | 2.99 | |
| Carga total sobre la cresta (t) 5.18 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | |
| Ancho del río (L) | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| Pendiente media del río | 7.25% | 7.25% | 7.25% | 7.25% | 7.25% | 7.25% | 7.25% | |
| Caudal de diseño Q (m3/s) | 1.71 | 1.47 | 1.44 | 1.38 | 1.5 | 1.55 | 1.6 | |
| Vc de la bocatoma 5.14 | 17.5 | 16 | 15.8 | 15.4 | 16.4 | 16.8 | 17 | |
| Vc del muro de encauzamiento 5.15 | 580 | 550 | 530 | 510 | 555 | 560 | 570 | |
| Ve de la bocatoma | 35 | 32 | 31.6 | 30.8 | 32.8 | 33.6 | 34 | |
| Ve del muro de encauzamiento 5.15 | 1160 | 1100 | 1060 | 1020 | 1110 | 1120 | 1140 | |
| E. muro de encauzamiento x2 (int+ext) 5.16 | 1790 | 1660 | 1640 | 1550 | 1690 | 1730 | 1750 | |
| E. Bocatoma (m2) 5.14 | 64 | 58 | 57 | 56 | 59 | 62 | 63 | |
| Volumen de concreto total de la obra de toma (m3) | 597.5 | 566 | 545.8 | 525.4 | 571.4 | 576.8 | 587 | |
| Volumen total de excavación de la obra de toma (m3) | 1195 | 1132 | 1091.6 | 1050.8 | 1142.8 | 1153.6 | 1174 | |
| Encofrado total (m2) 5.15 | 1854 | 1718 | 1697 | 1606 | 1749 | 1792 | 1813 | |

2. Tabla de volumen de concreto, volumen de excavación y área de encofrado del canal de aducción

| Lámina 5.26.1 | | | | | | | |
|---|-----------|-----------|-----------|-----------|----------|-----------|-----------|
| Pendiente de fondo | 0.001 | | | | | | |
| Talud paredes | 1/4 :1 | | | | | | |
| Longitud del canal (m) | 7400 | | | | | | |
| Dimensiones secc.trapezoidal Láminas 5.26.2, 5.26.3 | | | | | | | |
| | 50% | 75% | 90% | 95% | | | |
| Caudal de diseño Q (m3/s) | 1.71 | 1.47 | 1.44 | 1.38 | 1.5 | 1.55 | 1.6 |
| Tirante de agua (m) 5.26.1 | 0.95 | 0.89 | 0.88 | 0.85 | 0.90 | 0.91 | 0.93 |
| Ancho de fondo (m) 5.26.2 | 1.15 | 1.07 | 1.05 | 1.03 | 1.08 | 1.10 | 1.13 |
| Altura desde el fondo (m) 5.26.2 | 1.28 | 1.20 | 1.18 | 1.15 | 1.24 | 1.25 | 1.26 |
| Pendiente en el fondo del canal | 1/1000 | 1/1000 | 1/1000 | 1/1000 | 1/1000 | 1/1000 | 1/1000 |
| Caudal de diseño Q (m3/s) | 1.71 | 1.47 | 1.44 | 1.38 | 1.5 | 1.55 | 1.6 |
| Volumen de concreto (m3/m) 5.26.3 | 0.88 | 0.78 | 0.77 | 0.75 | 0.80 | 0.82 | 0.85 |
| Volumen de excavación (m3/m) 5.26.3 | 4.80 | 4.30 | 4.20 | 3.80 | 4.40 | 4.50 | 4.60 |
| Encofrado (m2/m) 5.26.3 | 4.4 | 4 | 3.9 | 3.8 | 4.1 | 4.2 | 4.3 |
| COSTO POR METRO LINEAL | 658.56 | 588.66 | 578.57 | 561.88 | 603.57 | 618.49 | 638.23 |
| Long. Desarenador | 14.26 | 13.23 | 13.06 | 12.73 | 13.40 | 13.61 | 13.81 |
| Metrado (m) | 7385.74 | 7386.77 | 7386.94 | 7387.27 | 7386.6 | 7386.39 | 7386.19 |
| Volumen de concreto (m3) | 6499.4512 | 5761.6806 | 5687.9438 | 5540.4525 | 5909.28 | 6056.8398 | 6277.879 |
| Volumen de excavación (m3) | 35451.552 | 31763.111 | 31025.148 | 28071.626 | 32501.04 | 33238.755 | 33974.404 |
| Encofrado (m2) | 32497.256 | 29547.08 | 28809.066 | 28071.626 | 30285.06 | 31022.838 | 31758.682 |

3. Tabla de volumen de concreto, volumen de excavación y área de encofrado del desarenador

| DESARENADOR | | | | | | | |
|--|--------|--------|--------|--------|------|-------|-------|
| Diámetro máximo de partículas a eliminar Tabla 5.4.4 | 0.5mm | | | | | | |
| Láminas 5.4.4, 5.4.2, 5.23 | 50% | 75% | 90% | 95% | | | |
| Q Caudal máximo diario (m3/s) | 1.71 | 1.47 | 1.44 | 1.38 | 1.5 | 1.55 | 1.6 |
| Longitud (m) 5.4.4 | 14.26 | 13.23 | 13.06 | 12.73 | 13.4 | 13.61 | 13.81 |
| Ancho (m) 5.4.4 | 3.41 | 3.17 | 3.14 | 3.08 | 3.2 | 3.25 | 3.3 |
| Diámetro mínimo de partículas a eliminar (mm) 5.4.2 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Volumen de excavación (m3) 5.23 | 210.00 | 175.00 | 170.00 | 160.00 | 180 | 185 | 190 |
| Volumen de concreto (m3) 5.23 | 64 | 52 | 50 | 46 | 54 | 56 | 58 |
| Área de encofrado (m2) 5.23 | 100 | 89 | 87 | 84 | 93 | 95 | 97 |

4. Tabla de volumen de concreto, volumen de excavación y área de encofrado de la cámara de carga

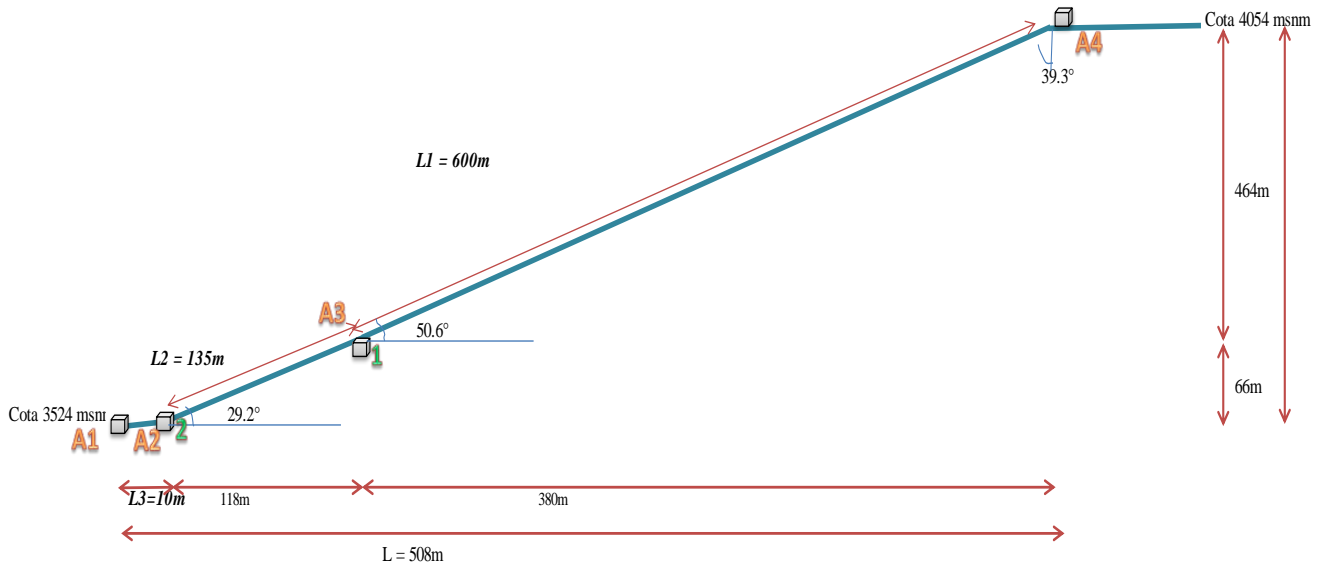
| CÁMARA DE CARGA | | | | | | | |
|---|--------|--------|--------|--------|--------|--------|--------|
| Láminas 5.4.6, 5.30 | 50% | 75% | 90% | 95% | | | |
| Cota (m) | 4050 | | | | | | |
| Caudal (m3/s) | 1.71 | 1.47 | 1.44 | 1.38 | 1.5 | 1.55 | 1.6 |
| Longitud L (m) 5.4.6 | 14.26 | 13.23 | 13.06 | 12.73 | 1.4 | 13.61 | 13.81 |
| Ancho de la poza (m) 5.4.6 | 3.41 | 3.17 | 3.14 | 3.08 | 3.2 | 3.25 | 3.3 |
| Tirante inicial d1 (m) 5.4.6 | 1.71 | 1.59 | 1.57 | 1.54 | 1.6 | 1.63 | 1.65 |
| Tirante a la entrada a la tubería M (m) 5 | 1.78 | 1.69 | 1.68 | 1.65 | 1.7 | 1.72 | 1.74 |
| Volumen de excavación (m3) 5.30 | 260.00 | 210.00 | 205.00 | 200.00 | 220.00 | 230.00 | 240.00 |
| Volumen de concreto (m3) 5.30 | 60.00 | 54.00 | 52.00 | 50.00 | 56.00 | 57.00 | 58.00 |
| Área de Encofrado (m2) 5.30 | 250 | 220 | 215 | 210 | 230 | 240 | 245 |

5. Tabla de volumen de concreto, volumen de excavación y área de encofrado del canal de descarga

| CANAL DE DESCARGA | | | | | | | |
|--|--------|--------|--------|--------|--------|--------|--------|
| Lámina 5.26.3 | 50% | 75% | 90% | 95% | | | |
| Caudal de diseño Q (m3/s) | 1.71 | 1.47 | 1.44 | 1.38 | 1.5 | 1.55 | 1.6 |
| Tirante de agua (m) | 0.95 | 0.89 | 0.88 | 0.85 | 0.90 | 0.91 | 0.93 |
| Ancho de fondo (m) | 1.15 | 1.07 | 1.05 | 1.03 | 1.08 | 1.10 | 1.13 |
| Altura desde el fondo (m) | 1.28 | 1.20 | 1.18 | 1.15 | 1.24 | 1.25 | 1.26 |
| Pendiente en el fondo del canal | 1/1000 | 1/1000 | 1/1000 | 1/1000 | 1/1005 | 1/1006 | 1/1007 |
| Caudal de diseño Q (m3/s) | 1.71 | 1.47 | 1.44 | 1.38 | 1.5 | 1.55 | 1.6 |
| Volumen de concreto (m3/m) Lámina 5.26.3 | 0.88 | 0.78 | 0.77 | 0.75 | 0.80 | 0.82 | 0.85 |
| Volumen de excavación (m3/m) Lámina 5.26.3 | 4.80 | 4.30 | 4.20 | 3.80 | 4.40 | 4.50 | 4.60 |
| Encofrado (m2/m) Lámina 5.26.3 | 4.40 | 4.00 | 3.90 | 3.80 | 4.10 | 4.20 | 4.30 |
| COSTO POR METRO LINEAL | 655.36 | 586.33 | 576.02 | 559.40 | 601.17 | 616.01 | 635.39 |
| Longitud del canal de descarga(m) | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| Volumen de concreto (m3) | 8.80 | 7.80 | 7.70 | 7.50 | 8.00 | 8.20 | 8.50 |
| Volumen de excavación (m3) | 48.00 | 43.00 | 42.00 | 38.00 | 44.00 | 45.00 | 46.00 |
| Encofrado (m2) | 44.00 | 40.00 | 39.00 | 38.00 | 41.00 | 42.00 | 43.00 |

Para el cálculo de la tubería forzada se tomaron en cuenta las siguientes consideraciones:

1. Definición del trazo: éste se definió de manera de poder obtener una diferencia apropiada de niveles (salto), alcanzando una potencia adecuada y evitando obstáculos mayores.



2. Parámetros de entrada

| | 50% | 75% | 90% | 95% | | | |
|---|------|------|------|------|-----|------|-----|
| Longitud (m) | 735 | 735 | 735 | 735 | 735 | 735 | 735 |
| Número de anclajes | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Caudal de diseño (m ³ /s) | 1.71 | 1.47 | 1.44 | 1.38 | 1.5 | 1.55 | 1.6 |
| Altura bruta del proyecto (m) | 530 | 530 | 530 | 530 | 530 | 530 | 530 |
| Efecto sobrepresión golpe de ariete (m) | 159 | 159 | 159 | 159 | 159 | 159 | 159 |

3. Predimensionamiento

| Caudal de diseño (m ³ /s) | 1.71 | 1.47 | 1.44 | 1.38 | 1.5 | 1.55 | 1.6 |
|--|-------|-------|-------|-------|-------|-------|-------|
| Diámetro de la tubería E. Bondschú (m) | 0.630 | 0.591 | 0.585 | 0.575 | 0.596 | 0.604 | 0.612 |
| Diámetro bifurcación E. Bondschú (m) | 0.469 | 0.439 | 0.436 | 0.428 | 0.443 | 0.449 | 0.456 |

4. Velocidad en la tubería y velocidad de bifurcación

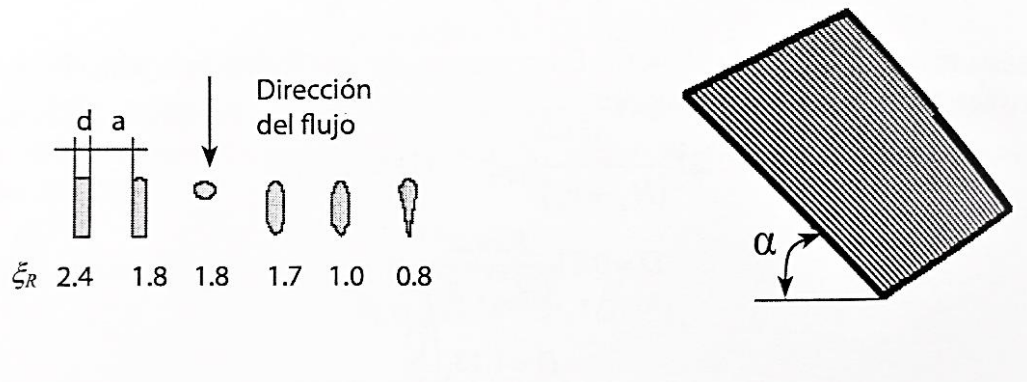
| | | | | | | | |
|--------------------------------|------|------|------|------|------|------|------|
| Velocidad en la tubería (m/s) | 5.48 | 5.36 | 5.35 | 5.32 | 5.38 | 5.41 | 5.43 |
| Velocidad de bifurcación (m/s) | 9.91 | 9.69 | 9.67 | 9.60 | 9.72 | 9.77 | 9.82 |

5. Pérdidas en la rejilla

| | | | | | | | |
|--------------|------|------|------|------|------|------|------|
| ϵ_r | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| hr (m) | 1.23 | 1.17 | 1.17 | 1.15 | 1.18 | 1.19 | 1.20 |

- Para la determinación de las pérdidas en la rejilla se consideró lo siguiente:
-El valor ξ_R (pérdidas en la rejilla por fricción) se consideró 0.8, según la figura a.:

Figura a. Pérdidas en rejilla por fricción

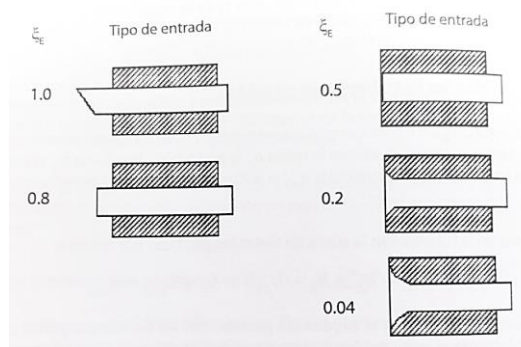


6. Pérdidas en el tipo de entrada de la tubería

| | | | | | | | |
|---------|------|------|------|------|------|------|------|
| ξ_e | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| he (m) | 0.31 | 0.29 | 0.29 | 0.29 | 0.30 | 0.30 | 0.30 |

- Para la determinación de las pérdidas en el tipo de entrada se consideró lo siguiente:
- El valor ξ_e (pérdidas en el tipo de entrada) se consideró 0.2, según la figura b.:

Figura b. Coeficiente de pérdidas en el tipo de entrada de la tubería



7. Pérdidas en los codos

| | | | | | | | |
|------------|-------|-------|-------|-------|-------|-------|-------|
| ξ_{r1} | 0.123 | 0.123 | 0.123 | 0.123 | 0.123 | 0.123 | 0.123 |
| ξ_{r2} | 0.164 | 0.164 | 0.164 | 0.164 | 0.164 | 0.164 | 0.164 |
| ξ_{r3} | 0.51 | 0.51 | 0.51 | 0.51 | 0.51 | 0.51 | 0.51 |
| hk (m) | 1.22 | 1.17 | 1.16 | 1.15 | 1.18 | 1.19 | 1.20 |

Figura c. Coeficiente de pérdida para codos de tubos circulares

| | | | | | | | |
|--------------------|-------|-------|-------|-------|-------|-------|-------|
| $\alpha(^{\circ})$ | 10 | 15 | 22.5 | 30 | 45 | 60 | 90 |
| ξ_k | 0.044 | 0.062 | 0.154 | 0.165 | 0.320 | 0.684 | 1.265 |

8. Pérdidas por fricción

| | | | | | | | |
|-----------------------------|-------|-------|-------|-------|-------|-------|-------|
| k (constante para el acero) | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 |
| λ | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 |
| h fricc (m) | 19.39 | 19.96 | 20.04 | 20.25 | 19.88 | 19.76 | 19.64 |

9. Pérdidas por bifurcación

| | | | | | | | |
|---|------|------|------|------|------|------|------|
| <i>Bifurcación tipo pantalón 45° desviación</i> | | | | | | | |
| $\epsilon_{ram A}$ | 0.48 | 0.48 | 0.48 | 0.48 | 0.48 | 0.48 | 0.48 |
| $\epsilon_{ram D}$ | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 |
| h A | 0.74 | 0.70 | 0.70 | 0.69 | 0.71 | 0.72 | 0.72 |
| h D | 0.51 | 0.48 | 0.48 | 0.48 | 0.49 | 0.49 | 0.50 |
| h ram total (m) | 1.24 | 1.19 | 1.18 | 1.17 | 1.20 | 1.21 | 1.22 |

- Para la determinación de las pérdidas por bifurcación se consideró lo siguiente:
 - Bifurcación tipo pantalón 45° desviación
 - El valor $\epsilon_{ram A}$, un valor de 0.48
 - El valor $\epsilon_{ram D}$, un valor de 0.33
 - El valor h A un valor de 0.74
 - El valor h D un valor de 0.74

10. Pérdidas totales en la tubería

| | | | | | | | |
|--------------------------------------|-------|-------|-------|-------|-------|-------|-------|
| Caudal de diseño (m ³ /s) | 1.71 | 1.47 | 1.44 | 1.38 | 1.5 | 1.55 | 1.6 |
| PÉRDIDAS TOTALES (m) | 23.39 | 23.78 | 23.84 | 24.00 | 23.73 | 23.64 | 23.56 |
| PÉRDIDAS TOTALES (%) | 4.41% | 4.49% | 4.50% | 4.53% | 4.48% | 4.46% | 4.44% |

11. Espesor de la tubería

Caudal 1.71 m³/s

| Diámetro 630mm | | | | | |
|----------------|---------------|-----------|-------|------------------------|---------------|
| Tramo | Long. Parcial | Espesor m | D m | Volumen m ³ | Peso kg |
| 1 | 600.00 | 0.2291 | 0.630 | 173.141 | 1,359,153.886 |
| 2 | 135.00 | 0.2291 | 0.630 | 38.957 | 305,809.624 |
| 3 | 10.00 | 0.1712 | 0.469 | 1.600 | 12,560.053 |
| TOTAL (Tn) | | | | | 1,677,523.564 |

Caudal 1.47 m³/s

| Diámetro 591mm | | | | | |
|----------------|--------------------|-----------|-------|------------------------|---------------|
| Tramo | Long. Inc. Parcial | Espesor m | D m | Volumen m ³ | Peso kg |
| 1 | 600.00 | 0.2150 | 0.591 | 152.229 | 1,194,998.984 |
| 2 | 135.00 | 0.2150 | 0.591 | 34.252 | 268,874.771 |
| 3 | 10.00 | 0.1607 | 0.439 | 1.407 | 11,044.425 |
| TOTAL (Tn) | | | | | 1,474,918.181 |

Caudal 1.44 m³/s

| Diámetro 585mm | | | | | |
|----------------|--------------------|-----------|-------|------------------------|---------------|
| Tramo | Long. Inc. Parcial | Espesor m | D m | Volumen m ³ | Peso Tn |
| 1 | 600.00 | 0.2131 | 0.585 | 149.581 | 1,174,212.229 |
| 2 | 135.00 | 0.2131 | 0.585 | 33.656 | 264,197.752 |
| 3 | 10.00 | 0.1593 | 0.436 | 1.382 | 10,852.496 |
| TOTAL (Tn) | | | | | 1,449,262.477 |

Caudal 1.38 m³/s

| Diámetro 575mm | | | | | |
|----------------|--------------------|-----------|-------|------------------------|---------------|
| Tramo | Long. Inc. Parcial | Espesor m | D m | Volumen m ³ | Peso Tn |
| 1 | 600.00 | 0.2093 | 0.575 | 144.260 | 1,132,444.900 |
| 2 | 135.00 | 0.2093 | 0.575 | 32.459 | 254,800.102 |
| 3 | 10.00 | 0.1565 | 0.428 | 1.333 | 10,466.841 |
| TOTAL (Tn) | | | | | 1,397,711.843 |

Caudal 1.50 m³/s

| Diámetro 596mm | | | | | |
|----------------|------------|---------|-------|----------------|---------------|
| Tramo | Long. Inc. | Espesor | D | Volumen | Peso |
| | Parcial | m | m | m ³ | Tn |
| 1 | 600.00 | 0.2168 | 0.596 | 154.869 | 1,215,723.161 |
| 2 | 135.00 | 0.2168 | 0.596 | 34.846 | 273,537.711 |
| 3 | 10.00 | 0.1620 | 0.443 | 1.431 | 11,235.776 |
| TOTAL (Tn) | | | | | 1,500,496.647 |

Caudal 1.55 m³/s

| Diámetro 604mm | | | | | |
|----------------|------------|---------|-------|----------------|---------------|
| Tramo | Long. Inc. | Espesor | D | Volumen | Peso |
| | Parcial | m | m | m ³ | Tn |
| 1 | 600.00 | 0.2198 | 0.604 | 159.252 | 1,250,128.273 |
| 2 | 135.00 | 0.2198 | 0.604 | 35.832 | 281,278.861 |
| 3 | 10.00 | 0.1643 | 0.449 | 1.472 | 11,553.441 |
| TOTAL (Tn) | | | | | 1,542,960.575 |

Caudal 1.60 m³/s

| Diámetro 612mm | | | | | |
|----------------|------------|---------|-------|----------------|---------------|
| Tramo | Long. Inc. | Espesor | D | Volumen | Peso |
| | Parcial | m | m | m ³ | Tn |
| 1 | 600.00 | 0.2228 | 0.612 | 163.614 | 1,284,369.825 |
| 2 | 135.00 | 0.2228 | 0.612 | 36.813 | 288,983.211 |
| 3 | 10.00 | 0.1665 | 0.456 | 1.512 | 11,869.591 |
| TOTAL (Tn) | | | | | 1,585,222.626 |

Suministros y obras electromecánicas

1. Se consideró que el proyecto contará con dos turbinas Pelton pues en las centrales debe usarse 2 turbinas para darle mayor flexibilidad al sistema porque permiten operar con una turbina con caudales bajos en épocas de estiaje o por mantenimiento del sistema (Ortiz, 2011).
2. Para determinar su costo, se usó la curva paramétrica Cost base for small-scale hydropower plants (NVE, 2012). Ésta se encuentra en el anexo n Curvas paramétricas. El tipo de cambio se consideró 1nok=0.41soles. La curva empleada incluye la turbina,

la turbina de control, la válvula de entrada, el generador, el sistema de control, la estación de conmutación y el transformador.

a. Tabla de costos de inversión del equipo electromecánico

| Caudal (m3/s) | Caudal en cada turbina (m3/s) | Precio (NOK/kW) | Precio por turbina(soles/kw) | COSTO TOTAL |
|---------------|-------------------------------|-----------------|------------------------------|------------------|
| 1.71 | 0.86 | 3100 | 1271 | S/. 9,076,868.45 |
| 1.6 | 0.80 | 3150 | 1292 | S/. 8,616,888.00 |
| 1.55 | 0.78 | 3190 | 1308 | S/. 8,445,110.30 |
| 1.5 | 0.75 | 3250 | 1333 | S/. 8,349,445.00 |
| 1.47 | 0.74 | 3300 | 1353 | S/. 8,292,537.00 |
| 1.44 | 0.72 | 3320 | 1361 | S/. 8,186,256.80 |
| 1.38 | 0.69 | 3400 | 1394 | S/. 8,000,166.00 |

3. Costo de la celda de celda de conexión al SEIN

b. Tabla de costos de la celda de conexión 22.9kV al SEIN

| Celda conexión 22.9kV al SEIN | | | | |
|-------------------------------|--------|----------|---------------------|---------------|
| Descripción | Unidad | Cantidad | Costo unitario (\$) | Subtotal (\$) |
| Interruptores 23kV | u | 1 | 18500 | 18500 |
| Celdas 23kV | u | 1 | 3500 | 3500 |
| Subtotal (\$) | | | | 22000 |
| COSTO TOTAL | | | | 71720 |

4. Línea de transmisión

c. Tabla de costo de la línea de transmisión

| LÍNEA DE TRANSMISIÓN DE 22.9kV HASTA SUBESTACIÓN SAN MATEO DE LUZ DEL SUR | | | | | | | |
|---|--------|---------------------|-------------------|-----------------|---------------------|----------------|-------------------|
| Descripción | Unidad | Costo de materiales | Costo de recursos | Costo indirecto | Costo total (\$/km) | Distancia (km) | COSTO TOTAL (s/.) |
| Red aérea conductor de aleación de aluminio 3x120mm | km | 8114 | 4238 | 2567 | 14919 | 21.43 | 1042268.194 |

Costo total caudal 1.71m³/s

| Descripción | Unidad | Precio(\$/u) | Metrado | Parcial | Subtotal | |
|--|----------------------|--------------|------------|------------------|----------------|--------------------------|
| OBRAS CIVILES | Ratio | | | | \$ (dolares) | S/. (soles) |
| BOCATOMA | | | | | \$169,307.92 | S/. 551,943.81 |
| Movimiento de tierra | m ³ | 13.98 | 1195 | 16706.1 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.1 m ³ | 77.84 | 59.75 | 4650.94 | | |
| Concreto bocatoma | 0.9 m ³ | 110.27 | 537.75 | 59297.6925 | | |
| Encofrado y desencofrado | 10.87 m ² | 1854 | | 20152.98 | | |
| Acero | 70 Kg | 1.47 | 37642.5 | 55334.475 | | |
| Aliviadero | | | | | | |
| Movimiento de tierra | 0.07 m ³ | 1.82 | 83.65 | 152.243 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.16 m ³ | 77.84 | 9.56 | 744.1504 | | |
| Concreto | 0.1 m ³ | 110.27 | 53.775 | 5929.76925 | | |
| Encofrado y desencofrado | 0.04 m ² | 10.87 | 74.16 | 806.1192 | | |
| Acero | 70 Kg | 1.47 | 3764.25 | 5533.4475 | | |
| DESARENADOR | | | | | \$18,686.33 | S/. 60,917.44 |
| Movimiento de tierra | m ³ | 12.75 | 210 | 2677.5 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.1 m ³ | 77.84 | 6.4 | 498.176 | | |
| Concreto desarenador | 0.9 m ³ | 110.27 | 57.6 | 6351.552 | | |
| Encofrado y desencofrado | 10.87 m ² | 100 | | 1087 | | |
| Acero | 70 Kg | 1.47 | 4032 | 5927.04 | | |
| Conducto de Purga | | | | | | |
| Movimiento de tierra | 0.18 m ³ | 13.86 | 37.8 | 523.908 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.08 m ³ | 77.84 | 0.512 | 39.85408 | | |
| Concreto | 0.09 m ³ | 139.23 | 5.184 | 721.76832 | | |
| Encofrado y desencofrado | 0.3 m ² | 10.87 | 30 | 326.1 | | |
| Acero | 70 Kg | 1.47 | 362.88 | 533.4336 | | |
| CONDUCCIÓN | | | | | \$1,827,562.24 | S/. 5,957,852.91 |
| Movimiento de tierra | m ³ | 9.43 | 35451.552 | 334308.14 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.05 m ³ | 77.84 | 325 | 25298 | | |
| Concreto relleno | 0.1 m ³ | 77.84 | 650 | 50596 | | |
| Concreto canal de conducción | 0.85 m ³ | 89.7 | 5525 | 495592.5 | | |
| Encofrado y desencofrado | 10.87 m ² | 32497.25 | | 353245.1075 | | |
| Acero | 70 Kg | 1.47 | 386750 | 568522.5 | | |
| CÁMARA DE CARGA | | | | | \$19,539.63 | S/. 63,699.19 |
| Movimiento de tierra | m ³ | 12.75 | 260 | 3315 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.05 m ³ | 77.84 | 3 | 233.52 | | |
| Concreto relleno lat | 0.1 m ³ | 77.84 | 6 | 467.04 | | |
| Concreto cámara de carga | 0.85 m ³ | 110.27 | 51 | 5623.77 | | |
| Encofrado y desencofrado | 10.87 m ² | 250 | | 2717.5 | | |
| Acero | 70 Kg | 1.47 | 3570 | 5247.9 | | |
| Aliviadero | | | | | | |
| Movimiento de tierra | m ³ | 9.43 | 13 | 122.59 | | |
| Obras de concreto anclajes | | | | | | |
| Concreto solado | 0.16 m ³ | 77.84 | 0.48 | 37.3632 | | |
| Concreto | 0.1 m ³ | 217.07 | 5.1 | 1107.057 | | |
| Encofrado y desencofrado | 0.04 m ² | 14.31 | 10 | 143.1 | | |
| Acero | 70 Kg | 1.47 | 357 | 524.79 | | |
| TUBERÍA FORZADA | | | | | \$7,556,536.12 | S/. 24,634,307.75 |
| Movimiento de tierra | | | | | | |
| Excavación con equipo en material suelto para la estructura | 0.6 m ³ | 3.05 | 47.4 | S/. 144.57 | | |
| Excavación con equipo en roca fija para la estructura | 0.4 m ³ | 9.54 | 31.6 | S/. 301.46 | | |
| Anclajes | | | | | | |
| Movimiento de tierra | 0.4 m ³ | 22.39 | 18.96 | S/. 424.51 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.6 m ³ | 77.84 | 11.376 | S/. 885.51 | | |
| Concreto anclajes | 0.3 m ³ | 139.23 | 5.688 | S/. 791.94 | | |
| Encofrado y desencofrado | 0.4 m ² | 14.31 | 7.584 | S/. 108.53 | | |
| Acero | 55 Kg | 1.47 | 312.84 | S/. 459.87 | | |
| Apoyos | | | | | | |
| Movimiento de tierra | 0.75 m ³ | 41.97 | 14.22 | S/. 596.81 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.95 m ³ | 77.84 | 10.8072 | S/. 841.23 | | |
| Concreto apoyos | 0.95 m ³ | 139.23 | 5.4036 | S/. 752.34 | | |
| Encofrado y desencofrado | 0.8 m ² | 14.31 | 6.0672 | S/. 86.82 | | |
| Acero | 55 Kg | 1.47 | 297.198 | S/. 436.88 | | |
| Tubería | | | | | | |
| Tubería | Kg | 4.5 | 1677523.56 | S/. 7,548,856.02 | | |
| Pantalón | | | | | | |
| Movimiento de tierra | m ³ | 35.89 | | | | |
| Excavación con equipo en roca fija para la estructura | 0.4 m ³ | 9.54 | 5.688 | S/. 54.26 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.85 m ³ | 77.84 | 9.18612 | S/. 715.05 | | |
| Concreto apoyos | 0.85 m ³ | 139.23 | 4.59306 | S/. 639.49 | | |
| Encofrado y desencofrado | 0.8 m ² | 14.31 | 4.85376 | S/. 69.46 | | |
| Acero | 55 Kg | 1.47 | 252.6183 | S/. 371.35 | | |
| CASA DE MÁQUINAS | | | | | \$137,675.55 | S/. 448,822.31 |
| Movimiento de tierra | | | | | | |
| Excavación masiva con equipo en material suelto | 0.17 m ³ | - | - | 33579.40351 | | |
| Excavación con equipo en roca fija para la estructura | 0.6 m ³ | - | - | 20147.64211 | | |
| Perfilado y compactado | 0.25 m ³ | - | - | 8394.850877 | | |
| Obras de concreto | | | | | | |
| Instalaciones sanitarias | 0.15 m ³ | - | - | 5036.910526 | | |
| Instalaciones eléctricas | 0.011 glb | - | - | 90861.91538 | | |
| Costo Casa máquinas - Ratio | 0.014 glb | - | - | 2765.362642 | | |
| Caseta Vigilancia | 0.011 glb | - | - | 2172.784933 | | |
| Costo Casa máquinas - Ratio | 0.042 glb | - | - | 8296.087926 | | |
| EQUIPO ELECTROMECAÁNICO | | | | | \$2,784,316.00 | S/. 9,076,870.16 |
| Turbina pelton- Incluye turbina control, valvula, generador, sistema de control, estacion de conmutacion, transformador. | glb | - | - | 2784316 | | |
| CONDUCCIÓN DESCARGA | | | | | \$2,643.61 | S/. 8,618.17 |
| Movimiento de tierra | m ³ | 9.43 | 48 | 452.64 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.05 m ³ | 77.84 | 0.444 | 34.56096 | | |
| Concreto relleno | 0.1 m ³ | 77.84 | 0.888 | 69.12192 | | |
| Concreto canal de conducción | 0.85 m ³ | 110.27 | 7.548 | 832.31796 | | |
| Encofrado y desencofrado | 10.87 m ² | 44 | | 478.28 | | |
| Acero | 70 Kg | 1.47 | 528.36 | 776.6892 | | |
| LÍNEA DE TRANSMISIÓN 22.9kV | | | | | \$264,703.36 | S/. 862,932.95 |
| Red aérea conductor de aleación de aluminio 3x120mm2 | km | 12352 | 21.43 | 264703.36 | | |
| COSTO TOTAL | | | | | | S/. 41,665,964.70 |

Costo total caudal 1.60 m³/s

| Descripción | | Unidad | Precio(\$/u) | Metrado | Parcial | Subtotal | |
|---|--|--------|--------------|---------|----------|------------------|-------------------|
| | | Ratio | | | | \$ (dolares) | S/. (soles) |
| OBRAS CIVILES | | | | | | | |
| BOCATOMA | | | | | | | |
| Movimiento de tierra | | | m³ | 13.98 | 1174 | 16412.52 | |
| Obras de concreto | | | | | | | \$166,237.45 |
| Concreto solado | | 0.1 | m³ | 77.84 | 58.7 | 4569.208 | S/. 541,934.10 |
| Concreto bocatoma | | 0.9 | m³ | 110.27 | 528.3 | 58255.641 | |
| Encofrado y desencofrado | | | m² | 10.87 | 1813 | 19707.31 | |
| Acero | | 70 | Kg | 1.47 | 36981 | 54362.07 | |
| Aliviadero | | | | | | | |
| Movimiento de tierra | | 0.07 | m³ | 1.82 | 82.18 | 149.5676 | |
| Obras de concreto | | | | | | | |
| Concreto solado | | 0.16 | m³ | 77.84 | 9.392 | 731.07328 | |
| Concreto | | 0.1 | m³ | 110.27 | 52.83 | 5825.5641 | |
| Encofrado y desencofrado | | 0.04 | m² | 10.87 | 72.52 | 788.2924 | |
| Acero | | 70 | Kg | 1.47 | 3698.1 | 5436.207 | |
| DESARENADOR | | | | | | | |
| Movimiento de tierra | | | m³ | 12.75 | 190 | 2422.5 | \$17,019.81 |
| Obras de concreto | | | | | | | S/. 55,484.58 |
| Concreto solado | | 0.1 | m³ | 77.84 | 5.8 | 451.472 | |
| Concreto desarenador | | 0.9 | m³ | 110.27 | 52.2 | 5756.094 | |
| Encofrado y desencofrado | | | m² | 10.87 | 97 | 1054.39 | |
| Acero | | 70 | Kg | 1.47 | 3654 | 5371.38 | |
| Conducto de Purga | | | | | | | |
| Movimiento de tierra | | 0.18 | m³ | 13.86 | 34.2 | 474.012 | |
| Obras de concreto | | | | | | | |
| Concreto solado | | 0.08 | m³ | 77.84 | 0.464 | 36.11776 | |
| Concreto | | 0.09 | m³ | 139.23 | 4.698 | 654.10254 | |
| Encofrado y desencofrado | | 0.3 | m² | 10.87 | 29.1 | 316.317 | |
| Acero | | 70 | Kg | 1.47 | 328.86 | 483.4242 | |
| CONDUCCIÓN | | | | | | | |
| Movimiento de tierra | | | m³ | 9.43 | 33974 | 320374.82 | \$1,774,693.24 |
| Obras de concreto | | | | | | | S/. 5,785,499.95 |
| Concreto solado | | 0.05 | m³ | 77.84 | 313.9 | 24433.976 | |
| Concreto relleno | | 0.1 | m³ | 77.84 | 627.8 | 48867.952 | |
| Concreto canal de conducción | | 0.85 | m³ | 89.7 | 5336.3 | 478666.11 | |
| Encofrado y desencofrado | | | m² | 10.87 | 32497.25 | 353245.1075 | |
| Acero | | 70 | Kg | 1.47 | 373541 | 549105.27 | |
| CÁMARA DE CARGA | | | | | | | |
| Movimiento de tierra | | | m³ | 12.75 | 240 | 3060 | \$18,776.61 |
| Obras de concreto | | | | | | | S/. 61,211.74 |
| Concreto solado | | 0.05 | m³ | 77.84 | 2.9 | 225.736 | |
| Concreto relleno lat | | 0.1 | m³ | 77.84 | 5.8 | 451.472 | |
| Concreto cámara de carga | | 0.85 | m³ | 110.27 | 49.3 | 5436.311 | |
| Encofrado y desencofrado | | | m² | 10.87 | 245 | 2663.15 | |
| Acero | | 70 | Kg | 1.47 | 3451 | 5072.97 | |
| Aliviadero | | | | | | | |
| Movimiento de tierra | | | m³ | 9.43 | 12 | 113.16 | |
| Obras de concreto anclajes | | | | | | | |
| Concreto solado | | 0.16 | m³ | 77.84 | 0.464 | 36.11776 | |
| Concreto | | 0.1 | m³ | 217.07 | 4.93 | 1070.1551 | |
| Encofrado y desencofrado | | 0.04 | m² | 14.31 | 9.8 | 140.238 | |
| Acero | | 70 | Kg | 1.47 | 345.1 | 507.297 | |
| TUBERÍA FORZADA | | | | | | | |
| Movimiento de tierra | | | m³ | 3.05 | 44.4 | S/. 135.42 | \$7,140,697.52 |
| Excavacion con equipo en material suelto para la estructura | | 0.4 | m³ | 9.54 | 29.6 | S/. 282.38 | S/. 23,278,673.91 |
| Excavacion con equipo en roca fija para la estructura | | | | | | S/. - | |
| Anclajes | | | | | | | |
| Movimiento de tierra | | 0.4 | m³ | 22.39 | 17.76 | S/. 397.65 | |
| Obras de concreto | | | | | | | |
| Concreto solado | | 0.6 | m³ | 77.84 | 10.656 | S/. 829.46 | |
| Concreto anclajes | | 0.3 | m³ | 139.23 | 5.328 | S/. 741.82 | |
| Encofrado y desencofrado | | 0.4 | m² | 14.31 | 7.104 | S/. 101.66 | |
| Acero | | 55 | Kg | 1.47 | 293.04 | S/. 430.77 | |
| Apoyos | | | | | | | |
| Movimiento de tierra | | 0.75 | m³ | 41.97 | 13.32 | S/. 559.04 | |
| Obras de concreto | | | | | | | |
| Concreto solado | | 0.95 | m³ | 77.84 | 10.1232 | S/. 787.99 | |
| Concreto apoyos | | 0.95 | m³ | 139.23 | 5.0616 | S/. 704.73 | |
| Encofrado y desencofrado | | 0.8 | m² | 14.31 | 5.6832 | S/. 81.33 | |
| Acero | | 55 | Kg | 1.47 | 278.388 | S/. 409.23 | |
| Tubería | | | | | | | |
| Tubería | | | Kg | 4.5 | 1585223 | S/. 7,133,503.50 | |
| Pantalón | | | | | | | |
| Movimiento de tierra | | | m³ | 35.89 | | | |
| Excavacion con equipo en roca fija para la estructura | | 0.4 | m³ | 9.54 | 5.328 | S/. 50.83 | |
| Obras de concreto | | | | | | | |
| Concreto solado | | 0.85 | m³ | 77.84 | 8.60472 | S/. 669.79 | |
| Concreto apoyos | | 0.85 | m³ | 139.23 | 4.30236 | S/. 599.02 | |
| Encofrado y desencofrado | | 0.8 | m² | 14.31 | 4.54656 | S/. 65.06 | |
| Acero | | 55 | Kg | 1.47 | 236.6298 | S/. 347.85 | |
| CASA DE MÁQUINAS | | | | | | | |
| Movimiento de tierra | | | m³ | | | 32970.42825 | \$135,178.76 |
| Excavación masiva con equipo en material suelto | | 0.6 | m³ | - | - | 19782.25695 | S/. 440,682.74 |
| Excavación con equipo en roca fija para la estructura | | 0.25 | m³ | - | - | 8242.607063 | |
| Perfilado y compactado | | 0.15 | m³ | - | - | 4945.564238 | |
| Obras de concreto | | | | | | | |
| Concreto | | 0.46 | glb | - | - | 89214.09998 | |
| Instalaciones sanitarias | | 0.014 | glb | - | - | 2715.211739 | |
| Instalaciones eléctricas | | 0.011 | glb | - | - | 2133.380652 | |
| Caseta Vigilancia | | 0.042 | glb | - | - | 8145.635216 | |
| Costo Casa máquinas - Ratio | | 193944 | | | | | |
| EQUIPO ELECTROMECAÁNICO | | | | | | | |
| Turbina pelton- Incluye turbina control, valvula,generador,sistema de control,estacion de conmutacion, transformador. | | | glb | - | - | 2643217 | \$2,643,217.00 |
| CONDUCCIÓN DESCARGA | | | | | | | |
| Movimiento de tierra | | | m³ | 9.43 | 46 | 433.78 | \$2,540.59 |
| Obras de concreto | | | | | | | S/. 8,282.32 |
| Concreto solado | | 0.05 | m³ | 77.84 | 0.425 | 33.082 | |
| Concreto relleno | | 0.1 | m³ | 77.84 | 0.85 | 66.164 | |
| Concreto canal de conducción | | 0.85 | m³ | 110.27 | 7.225 | 796.70075 | |
| Encofrado y desencofrado | | | m² | 10.87 | 43 | 467.41 | |
| Acero | | 70 | Kg | 1.47 | 505.75 | 743.4525 | |
| LINEA DE TRANSMISION 22.9kV | | | | | | | |
| Red aérea conductor de aleación de aluminio 3x120mm2 | | | km | 12352 | 21.43 | 264703.36 | \$264,703.36 |
| COSTO TOTAL | | | | | | | |
| | | | | | | | S/. 39,651,589.71 |

Costo total caudal 1.55 m³/s

| Descripción | Ratio | Unidad | Precio(\$/u) | Metrado | Parcial | Subtotal | |
|---|--------|--------|--------------|----------|------------------|----------------|-------------------|
| | | | | | | \$ (dolares) | S/. (soles) |
| OBRAS CIVILES | | | | | | | |
| BOCATOMA | | | | | | \$163,473.21 | S/. 532,922.68 |
| Movimiento de tierra | | m³ | 13.98 | 1154 | 16132.92 | | |
| Obras de concreto | | | | | | | |
| Concreto solado | 0.1 | m³ | 77.84 | 57.68 | 4489.8112 | | |
| Concreto bocatoma | 0.9 | m³ | 110.27 | 519.12 | 57243.3624 | | |
| Encofrado y desencofrado | | m² | 10.87 | 1792 | 19479.04 | | |
| Acero | 70 | Kg | 1.47 | 36338.4 | 53417.448 | | |
| Aliviadero | | | | | | | |
| Movimiento de tierra | 0.07 | m³ | 1.82 | 80.78 | 147.0196 | | |
| Obras de concreto | | | | | | | |
| Concreto solado | 0.16 | m³ | 77.84 | 9.2288 | 718.369792 | | |
| Concreto | 0.1 | m³ | 110.27 | 51.912 | 5724.33624 | | |
| Encofrado y desencofrado | 0.04 | m² | 10.87 | 71.68 | 779.1616 | | |
| Acero | 70 | Kg | 1.47 | 3633.84 | 5341.7448 | | |
| DESARENADOR | | | | | | \$16,475.58 | S/. 53,710.39 |
| Movimiento de tierra | | m³ | 12.75 | 185 | 2358.75 | | |
| Obras de concreto | | | | | | | |
| Concreto solado | 0.1 | m³ | 77.84 | 5.6 | 435.904 | | |
| Concreto desarenador | 0.9 | m³ | 110.27 | 50.4 | 5557.608 | | |
| Encofrado y desencofrado | | m² | 10.87 | 95 | 1032.65 | | |
| Acero | 70 | Kg | 1.47 | 3528 | 5186.16 | | |
| Conducto de Purga | | | | | | | |
| Movimiento de tierra | 0.18 | m³ | 13.86 | 33.3 | 461.538 | | |
| Obras de concreto | | | | | | | |
| Concreto solado | 0.08 | m³ | 77.84 | 0.448 | 34.87232 | | |
| Concreto | 0.09 | m³ | 139.23 | 4.536 | 631.54728 | | |
| Encofrado y desencofrado | 0.3 | m² | 10.87 | 28.5 | 309.795 | | |
| Acero | 70 | Kg | 1.47 | 317.52 | 466.7544 | | |
| CONDUCCIÓN | | | | | | \$1,712,976.78 | S/. 5,584,304.31 |
| Movimiento de tierra | | m³ | 9.43 | 33239 | 313443.77 | | |
| Obras de concreto | | | | | | | |
| Concreto solado | 0.05 | m³ | 77.84 | 302.85 | 23573.844 | | |
| Concreto relleno | 0.1 | m³ | 77.84 | 605.7 | 47147.688 | | |
| Concreto canal de conducción | 0.85 | m³ | 89.7 | 5148.45 | 461815.965 | | |
| Encofrado y desencofrado | | m² | 10.87 | 31023 | 337220.01 | | |
| Acero | 70 | Kg | 1.47 | 360391.5 | 529775.505 | | |
| CÁMARA DE CARGA | | | | | | \$18,366.49 | S/. 59,874.75 |
| Movimiento de tierra | | m³ | 12.75 | 230 | 2932.5 | | |
| Obras de concreto | | | | | | | |
| Concreto solado | 0.05 | m³ | 77.84 | 2.85 | 221.844 | | |
| Concreto relleno lat | 0.1 | m³ | 77.84 | 5.7 | 443.688 | | |
| Concreto cámara de carga | 0.85 | m³ | 110.27 | 48.45 | 5342.5815 | | |
| Encofrado y desencofrado | | m² | 10.87 | 240 | 2608.8 | | |
| Acero | 70 | Kg | 1.47 | 3391.5 | 4985.505 | | |
| Aliviadero | | | | | | | |
| Movimiento de tierra | | m³ | 9.43 | 11.5 | 108.445 | | |
| Obras de concreto anclajes | | | | | | | |
| Concreto solado | 0.16 | m³ | 77.84 | 0.456 | 35.49504 | | |
| Concreto | 0.1 | m³ | 217.07 | 4.845 | 1051.70415 | | |
| Encofrado y desencofrado | 0.04 | m² | 14.31 | 9.6 | 137.376 | | |
| Acero | 70 | Kg | 1.47 | 339.15 | 498.5505 | | |
| TUBERÍA FORZADA | | | | | | \$6,950,421.30 | S/. 22,658,373.44 |
| Movimiento de tierra | | | | | | | |
| Excavacion con equipo en material suelto para la estructura | 0.6 | m³ | 3.05 | 43.8 | S/. 133.59 | | |
| Excavacion con equipo en roca fija para la estructura | 0.4 | m³ | 9.54 | 29.2 | S/. 278.57 | | |
| Anclajes | | | | | | | |
| Movimiento de tierra | 0.4 | m³ | 22.39 | 17.52 | S/. 392.27 | | |
| Obras de concreto | | | | | | | |
| Concreto solado | 0.6 | m³ | 77.84 | 10.512 | S/. 818.25 | | |
| Concreto anclajes | 0.3 | m³ | 139.23 | 5.256 | S/. 731.79 | | |
| Encofrado y desencofrado | 0.4 | m² | 14.31 | 7.008 | S/. 100.28 | | |
| Acero | 55 | Kg | 1.47 | 289.08 | S/. 424.95 | | |
| Apoyos | | | | | | | |
| Movimiento de tierra | 0.75 | m³ | 41.97 | 13.14 | S/. 551.49 | | |
| Obras de concreto | | | | | | | |
| Concreto solado | 0.95 | m³ | 77.84 | 9.9864 | S/. 777.34 | | |
| Concreto apoyos | 0.95 | m³ | 139.23 | 4.9932 | S/. 695.20 | | |
| Encofrado y desencofrado | 0.8 | m² | 14.31 | 5.6064 | S/. 80.23 | | |
| Acero | 55 | Kg | 1.47 | 274.626 | S/. 403.70 | | |
| Tubería | | | | | | | |
| Tubería | | Kg | 4.5 | 1542961 | S/. 6,943,324.50 | | |
| Pantalón | | | | | | | |
| Movimiento de tierra | | m³ | 35.89 | | | | |
| Excavacion con equipo en roca fija para la estructura | 0.4 | m³ | 9.54 | 5.256 | S/. 50.14 | | |
| Obras de concreto | | | | | | | |
| Concreto solado | 0.85 | m³ | 77.84 | 8.48844 | S/. 660.74 | | |
| Concreto apoyos | 0.85 | m³ | 139.23 | 4.24422 | S/. 590.92 | | |
| Encofrado y desencofrado | 0.8 | m² | 14.31 | 4.48512 | S/. 64.18 | | |
| Acero | 55 | Kg | 1.47 | 233.4321 | S/. 343.15 | | |
| CASA DE MÁQUINAS | | | | | | \$132,930.97 | S/. 433,354.96 |
| Movimiento de tierra | 0.17 | m³ | - | - | 32422.18737 | | |
| Excavación masiva con equipo en material suelto | 0.6 | m³ | - | - | 19453.31242 | | |
| Excavación con equipo en roca fija para la estructura | 0.25 | m³ | - | - | 8105.546843 | | |
| Perfilado y compactado | 0.15 | m³ | - | - | 4863.328106 | | |
| Obras de concreto | | | | | | | |
| Instalaciones sanitarias | 0.014 | glb | - | - | 87730.62465 | | |
| Instalaciones eléctricas | 0.011 | glb | - | - | 2670.062489 | | |
| Caseta Vigilancia | 0.042 | glb | - | - | 2097.906242 | | |
| Costo Casa máquinas - Ratio | 190719 | | | | | | |
| EQUIPO ELECTROMECHANICO | | | | | | \$2,590,525.00 | S/. 8,445,111.50 |
| Turbina pelton- Incluye turbina control, valvula,generador,sistema de control,estacion de conmutacion, transformador. | | glb | - | - | 2590525 | | |
| CONDUCCIÓN DESCARGA | | | | | | \$2,462.43 | S/. 8,027.52 |
| Movimiento de tierra | | m³ | 9.43 | 45 | 424.35 | | |
| Obras de concreto | | | | | | | |
| Concreto solado | 0.05 | m³ | 77.84 | 0.41 | 31.9144 | | |
| Concreto relleno | 0.1 | m³ | 77.84 | 0.82 | 63.8288 | | |
| Concreto canal de conducción | 0.85 | m³ | 110.27 | 6.97 | 768.5819 | | |
| Encofrado y desencofrado | | m² | 10.87 | 42 | 456.54 | | |
| Acero | 70 | Kg | 1.47 | 487.9 | 717.213 | | |
| LINEA DE TRANSMISION 22.9kV | | | | | | \$264,703.36 | S/. 862,932.95 |
| Red aérea conductor de aleación de aluminio 3x120mm2 | | km | 12352 | 21.43 | 264703.36 | | |
| COSTO TOTAL | | | | | | | S/. 38,638,612.49 |

Costo total caudal 1.50 m³/s

| Descripción | Unidad | Precio(\$/u) | Metrado | Parcial | Subtotal | |
|---|------------|--------------|------------|------------------|----------------|--------------------------|
| | | | | | \$ (dolares) | S/. (soles) |
| OBRAS CIVILES | | | | | | |
| BOCATOMA | Ratio | | | | \$ 174,113.32 | S/. 567,609.44 |
| Movimiento de tierra | m³ | 13.98 | 1143 | 15979.14 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.1 m³ | 77.84 | 57.1 | 4444.664 | | |
| Concreto bocatoma | 0.9 m³ | 110.27 | 514.26 | 56707.4502 | | |
| Encofrado y desencofrado | m² | 10.87 | 1749 | 19011.63 | | |
| Acero | 85 Kg | 1.47 | 43712.1 | 64256.787 | | |
| Aliviadero | | | | | | |
| Movimiento de tierra | 0.07 m³ | 1.82 | 80.01 | 145.6182 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.16 m³ | 77.84 | 9.136 | 711.14624 | | |
| Concreto | 0.1 m³ | 110.27 | 51.426 | 5670.74502 | | |
| Encofrado y desencofrado | 0.04 m² | 10.87 | 69.96 | 760.4652 | | |
| Acero | 85 Kg | 1.47 | 4371.21 | 6425.6787 | | |
| DESARENADOR | | | | | | |
| Movimiento de tierra | m³ | 12.75 | 180 | 2295 | \$17,099.43 | S/. 55,744.13 |
| Obras de concreto | | | | | | |
| Concreto solado | 0.1 m³ | 77.84 | 5.4 | 420.336 | | |
| Concreto desarenador | 0.9 m³ | 110.27 | 48.6 | 5359.122 | | |
| Encofrado y desencofrado | m² | 10.87 | 93 | 1010.91 | | |
| Acero | 85 Kg | 1.47 | 4131 | 6072.57 | | |
| Conducto de Purga | | | | | | |
| Movimiento de tierra | 0.18 m³ | 13.86 | 32.4 | 449.064 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.08 m³ | 77.84 | 0.432 | 33.62688 | | |
| Concreto | 0.09 m³ | 139.23 | 4.374 | 608.99202 | | |
| Encofrado y desencofrado | 0.3 m² | 10.87 | 27.9 | 303.273 | | |
| Acero | 85 Kg | 1.47 | 371.79 | 546.5313 | | |
| CONDUCCIÓN | | | | | | |
| Movimiento de tierra | m³ | 9.43 | 32501 | 306484.43 | \$1,782,845.93 | S/. 5,812,077.72 |
| Obras de concreto | | | | | | |
| Concreto solado | 0.05 m³ | 77.84 | 295.465 | 22998.9956 | | |
| Concreto relleno | 0.1 m³ | 77.84 | 590.93 | 45997.9912 | | |
| Concreto canal de conducción | 0.85 m³ | 89.7 | 5022.905 | 450554.5785 | | |
| Encofrado y desencofrado | m² | 10.87 | 30285 | 329197.95 | | |
| Acero | 85 Kg | 1.47 | 426946.925 | 627611.9798 | | |
| CÁMARA DE CARGA | | | | | | |
| Movimiento de tierra | m³ | 12.75 | 220 | 2805 | \$19,053.70 | S/. 62,115.05 |
| Obras de concreto | | | | | | |
| Concreto solado | 0.05 m³ | 77.84 | 2.8 | 217.952 | | |
| Concreto relleno lat | 0.1 m³ | 77.84 | 5.6 | 435.904 | | |
| Concreto cámara de carga | 0.85 m³ | 110.27 | 47.6 | 5248.852 | | |
| Encofrado y desencofrado | m² | 10.87 | 230 | 2500.1 | | |
| Acero | 85 Kg | 1.47 | 4046 | 5947.62 | | |
| Aliviadero | | | | | | |
| Movimiento de tierra | m³ | 9.43 | 11 | 103.73 | | |
| Obras de concreto anclajes | | | | | | |
| Concreto solado | 0.16 m³ | 77.84 | 0.448 | 34.87232 | | |
| Concreto | 0.1 m³ | 217.07 | 4.76 | 1033.2532 | | |
| Encofrado y desencofrado | 0.04 m² | 14.31 | 9.2 | 131.652 | | |
| Acero | 85 Kg | 1.47 | 404.6 | 594.762 | | |
| TUBERÍA FORZADA | | | | | | |
| Movimiento de tierra | | | | | \$6,759,138.87 | S/. 22,034,792.71 |
| Excavacion con equipo en material suelto para la estructura | 0.6 m³ | 3.05 | 42.6 | S/. 129.93 | | |
| Excavacion con equipo en roca fija para la estructura | 0.4 m³ | 9.54 | 28.4 | S/. 270.94 | | |
| Anclajes | | | | | | |
| Movimiento de tierra | 0.4 m³ | 22.39 | 17.04 | S/. 381.53 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.6 m³ | 77.84 | 10.224 | S/. 795.84 | | |
| Concreto anclajes | 0.3 m³ | 139.23 | 5.112 | S/. 711.74 | | |
| Encofrado y desencofrado | 0.4 m² | 14.31 | 6.816 | S/. 97.54 | | |
| Acero | 55 Kg | 1.47 | 281.16 | S/. 413.31 | | |
| Apoyos | | | | | | |
| Movimiento de tierra | 0.75 m³ | 41.97 | 12.78 | S/. 536.38 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.95 m³ | 77.84 | 9.7128 | S/. 756.04 | | |
| Concreto apoyos | 0.95 m³ | 139.23 | 4.8564 | S/. 676.16 | | |
| Encofrado y desencofrado | 0.8 m² | 14.31 | 5.4528 | S/. 78.03 | | |
| Acero | 55 Kg | 1.47 | 267.102 | S/. 392.64 | | |
| Tubería | | | | | | |
| Tubería | Kg | 4.5 | 1500497 | S/. 6,752,236.50 | | |
| Pantalón | | | | | | |
| Movimiento de tierra | m³ | 35.89 | | | | |
| Excavacion con equipo en roca fija para la estructura | 0.4 m³ | 9.54 | 5.112 | S/. 48.77 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.85 m³ | 77.84 | 8.25588 | S/. 642.64 | | |
| Concreto apoyos | 0.85 m³ | 139.23 | 4.12794 | S/. 574.73 | | |
| Encofrado y desencofrado | 0.8 m² | 14.31 | 4.36224 | S/. 62.42 | | |
| Acero | 55 Kg | 1.47 | 227.0367 | S/. 333.74 | | |
| CASA DE MÁQUINAS | | | | | | |
| Movimiento de tierra | 0.17 m³ | - | - | 34532.47604 | \$141,583.15 | S/. 461,561.07 |
| Excavación masiva con equipo en material suelto | 0.6 m³ | - | - | 20719.48562 | | |
| Excavación con equipo en roca fija para la estructura | 0.25 m³ | - | - | 8633.119009 | | |
| Perfilado y compactado | 0.15 m³ | - | - | 5179.871406 | | |
| Obras de concreto | | | | | | |
| Instalaciones sanitarias | 0.014 glb | - | - | 93440.81751 | | |
| Instalaciones eléctricas | 0.011 glb | - | - | 2843.850968 | | |
| Caseta Vigilancia | 0.042 glb | - | - | 2234.454332 | | |
| Costo Casa máquinas - Ratio | 203132.212 | | | 8531.552903 | | |
| EQUIPO ELECTROMECAÁNICO | | | | | | |
| Turbina pelton- Incluye turbina control, valvula,generador,sistema de control,estacion de conmutacion, transformador. | glb | - | - | 2561179 | \$2,561,179.00 | S/. 8,349,443.54 |
| CONDUCCIÓN DESCARGA | | | | | | |
| Movimiento de tierra | m³ | 9.43 | 44 | 414.92 | \$2,403.55 | S/. 7,835.59 |
| Obras de concreto | | | | | | |
| Concreto solado | 0.05 m³ | 77.84 | 0.4 | 31.136 | | |
| Concreto relleno | 0.1 m³ | 77.84 | 0.8 | 62.272 | | |
| Concreto canal de conducción | 0.85 m³ | 110.27 | 6.8 | 749.836 | | |
| Encofrado y desencofrado | m² | 10.87 | 41 | 445.67 | | |
| Acero | 70 Kg | 1.47 | 476 | 699.72 | | |
| LÍNEA DE TRANSMISION 22.9KV | | | | | | |
| Red aérea conductor de aleación de aluminio 3x120mm2 | km | 12352 | 21.43 | 264703.36 | \$264,703.36 | S/. 862,932.95 |
| COSTO TOTAL | | | | | | S/. 38,214,112.20 |

Costo total caudal 1.47 m³/s

| Descripción | Unidad | Precio(\$/u) | Metrado | Parcial | Subtotal | |
|---|-----------|--------------|----------|------------------|----------------|--------------------------|
| Ratio | | | | | \$ (dolares) | S/.(soles) |
| OBRAS CIVILES | | | | | | |
| BOCATOMA | | | | | | |
| Movimiento de tierra | m³ | 13.98 | 1132 | 15825.36 | \$159,949.56 | S/. 521,435.58 |
| Obras de concreto | | | | | | |
| Concreto solado | 0.1 m³ | 77.84 | 56.6 | 4405.744 | | |
| Concreto bocatoma | 0.9 m³ | 110.27 | 509.4 | 56171.538 | | |
| Encofrado y desencofrado | m² | 10.87 | 1718 | 18674.66 | | |
| Acero | 70 Kg | 1.47 | 35658 | 52417.26 | | |
| Aliviadero | | | | | | |
| Movimiento de tierra | 0.07 m³ | 1.82 | 79.24 | 144.2168 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.16 m³ | 77.84 | 9.056 | 704.91904 | | |
| Concreto | 0.1 m³ | 110.27 | 50.94 | 5617.1538 | | |
| Encofrado y desencofrado | 0.04 m² | 10.87 | 68.72 | 746.9864 | | |
| Acero | 70 Kg | 1.47 | 3565.8 | 5241.726 | | |
| | | | | | \$15,358.86 | S/. 50,069.87 |
| DESARENADOR | | | | | | |
| Movimiento de tierra | m³ | 12.75 | 175 | 2231.25 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.1 m³ | 77.84 | 5.2 | 404.768 | | |
| Concreto desarenador | 0.9 m³ | 110.27 | 46.8 | 5160.636 | | |
| Encofrado y desencofrado | m² | 10.87 | 89 | 967.43 | | |
| Acero | 70 Kg | 1.47 | 3276 | 4815.72 | | |
| Conducto de Purga | | | | | | |
| Movimiento de tierra | 0.18 m³ | 13.86 | 31.5 | 436.59 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.08 m³ | 77.84 | 0.416 | 32.38144 | | |
| Concreto | 0.09 m³ | 139.23 | 4.212 | 586.43676 | | |
| Encofrado y desencofrado | 0.3 m² | 10.87 | 26.7 | 290.229 | | |
| Acero | 70 Kg | 1.47 | 294.84 | 433.4148 | | |
| | | | | | \$1,631,276.06 | S/. 5,317,959.94 |
| CONDUCCIÓN | | | | | | |
| Movimiento de tierra | m³ | 9.43 | 31763.1 | 299526.03 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.05 m³ | 77.84 | 288.1 | 22425.704 | | |
| Concreto relleno | 0.1 m³ | 77.84 | 576.2 | 44851.408 | | |
| Concreto canal de conducción | 0.85 m³ | 89.7 | 4897.7 | 439323.69 | | |
| Encofrado y desencofrado | m² | 10.87 | 29547 | 321175.89 | | |
| Acero | 70 Kg | 1.47 | 342839 | 503973.33 | | |
| | | | | | \$17,211.14 | S/. 56,108.31 |
| CÁMARA DE CARGA | | | | | | |
| Movimiento de tierra | m³ | 12.75 | 210 | 2677.5 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.05 m³ | 77.84 | 2.7 | 210.168 | | |
| Concreto relleno lat | 0.1 m³ | 77.84 | 5.4 | 420.336 | | |
| Concreto cámara de carga | 0.85 m³ | 110.27 | 45.9 | 5061.393 | | |
| Encofrado y desencofrado | m² | 10.87 | 220 | 2391.4 | | |
| Acero | 70 Kg | 1.47 | 3213 | 4723.11 | | |
| Aliviadero | | | | | | |
| Movimiento de tierra | m³ | 9.43 | 10.5 | 99.015 | | |
| Obras de concreto anclajes | | | | | | |
| Concreto solado | 0.16 m³ | 77.84 | 0.432 | 33.62688 | | |
| Concreto | 0.1 m³ | 217.07 | 4.59 | 996.3513 | | |
| Encofrado y desencofrado | 0.04 m² | 14.31 | 8.8 | 125.928 | | |
| Acero | 70 Kg | 1.47 | 321.3 | 472.311 | | |
| | | | | | \$6,643,838.93 | S/. 21,658,914.93 |
| TUBERÍA FORZADA | | | | | | |
| Movimiento de tierra | | | | | | |
| Excavación con equipo en material suelto para la estructura | 0.6 m³ | 3.05 | 41.4 | S/. 126.27 | | |
| Excavación con equipo en roca fija para la estructura | 0.4 m³ | 9.54 | 27.6 | S/. 263.30 | | |
| Anclajes | | | | | | |
| Movimiento de tierra | 0.4 m³ | 22.39 | 16.56 | S/. 370.78 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.6 m³ | 77.84 | 9.936 | S/. 773.42 | | |
| Concreto anclajes | 0.3 m³ | 139.23 | 4.968 | S/. 691.69 | | |
| Encofrado y desencofrado | 0.4 m² | 14.31 | 6.624 | S/. 94.79 | | |
| Acero | 55 Kg | 1.47 | 273.24 | S/. 401.66 | | |
| Apoyos | | | | | | |
| Movimiento de tierra | 0.75 m³ | 41.97 | 12.42 | S/. 521.27 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.95 m³ | 77.84 | 9.4392 | S/. 734.75 | | |
| Concreto apoyos | 0.95 m³ | 139.23 | 4.7196 | S/. 657.11 | | |
| Encofrado y desencofrado | 0.8 m² | 14.31 | 5.2992 | S/. 75.83 | | |
| Acero | 55 Kg | 1.47 | 259.578 | S/. 381.58 | | |
| Tubería | | | | | | |
| Tubería | Kg | 4.5 | 1474918 | S/. 6,637,131.00 | | |
| Pantalón | | | | | | |
| Movimiento de tierra | m³ | 35.89 | | | | |
| Excavación con equipo en roca fija para la estructura | 0.4 m³ | 9.54 | 4.968 | S/. 47.39 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.85 m³ | 77.84 | 8.02332 | S/. 624.54 | | |
| Concreto apoyos | 0.85 m³ | 139.23 | 4.01166 | S/. 558.54 | | |
| Encofrado y desencofrado | 0.8 m² | 14.31 | 4.23936 | S/. 60.67 | | |
| Acero | 55 Kg | 1.47 | 220.6413 | S/. 324.34 | | |
| | | | | | \$130,065.65 | S/. 424,014.03 |
| CASA DE MÁQUINAS | | | | | | |
| Movimiento de tierra | 0.17 m³ | | | 31723.3302 | | |
| Excavación masiva con equipo en material suelto | 0.6 m³ | - | - | 19033.99812 | | |
| Excavación con equipo en roca fija para la estructura | 0.25 m³ | - | - | 7930.83255 | | |
| Perfilado y compactado | 0.15 m³ | - | - | 4758.49953 | | |
| Obras de concreto | | | | | | |
| Instalaciones sanitarias | 0.014 glb | - | - | 85839.59937 | | |
| Instalaciones eléctricas | 0.011 glb | - | - | 2612.509546 | | |
| Caseta Vigilancia | 0.042 glb | - | - | 2052.686072 | | |
| | | | | | 7837.528638 | |
| Costo Casa máquinas - Ratio | | | | | 186607.8247 | |
| EQUIPO ELECTROMECÁNICO | | | | | \$2,543,723.00 | S/. 8,292,536.98 |
| Turbina pelton- Incluye turbina control, valvula,generador,sistema de control,estacion de conmutacion, transformador. | glb | - | - | 2543723 | | |
| | | | | | \$2,344.68 | S/. 7,643.66 |
| CONDUCCIÓN DESCARGA | | | | | | |
| Movimiento de tierra | m³ | 9.43 | 43 | 405.49 | | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.05 m³ | 77.84 | 0.39 | 30.3576 | | |
| Concreto relleno | 0.1 m³ | 77.84 | 0.78 | 60.7152 | | |
| Concreto canal de conducción | 0.85 m³ | 110.27 | 6.63 | 731.0901 | | |
| Encofrado y desencofrado | m² | 10.87 | 40 | 434.8 | | |
| Acero | 70 Kg | 1.47 | 464.1 | 682.227 | | |
| | | | | | \$264,703.36 | S/. 862,932.95 |
| LINEA DE TRANSMISION 22.9kV | | | | | | |
| Red aérea conductor de aleación de aluminio 3x120mm2 | km | 12352 | 21.43 | 264703.36 | | |
| COSTO TOTAL | | | | | | S/. 37,191,616.25 |

Costo total caudal 1.44 m³/s

| Descripción | Unidad | Precio(\$/u) | Metrado | Parcial | Subtotal | |
|--|-------------|--------------|---------|----------|------------------|--------------------------|
| | | | | | \$ (dolares) | S/. (soles) |
| OBRAS CIVILES | Ratio | | | | \$154,746.51 | S/. 504,473.63 |
| BOCATOMA | | | | | | |
| Movimiento de tierra | | m³ | 13.98 | 1092 | 15266.16 | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.1 | m³ | 77.84 | 54.6 | 4250.064 | |
| Concreto bocatoma | 0.9 | m³ | 110.27 | 491.4 | 54186.678 | |
| Encofrado y desencofrado | | m² | 10.87 | 1697 | 18446.39 | |
| Acero | 70 | Kg | 1.47 | 34398 | 50565.06 | |
| Aliviadero | | | | | | |
| Movimiento de tierra | 0.07 | m³ | 1.82 | 76.44 | 139.1208 | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.16 | m³ | 77.84 | 8.736 | 680.01024 | |
| Concreto | 0.1 | m³ | 110.27 | 49.14 | 5418.6678 | |
| Encofrado y desencofrado | 0.04 | m² | 10.87 | 67.88 | 737.8556 | |
| Acero | 70 | Kg | 1.47 | 3439.8 | 5056.506 | |
| DESARENADOR | | | | | \$14,814.63 | S/. 48,295.68 |
| Movimiento de tierra | | m³ | 12.75 | 170 | 2167.5 | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.1 | m³ | 77.84 | 5 | 389.2 | |
| Concreto desarenador | 0.9 | m³ | 110.27 | 45 | 4962.15 | |
| Encofrado y desencofrado | | m² | 10.87 | 87 | 945.69 | |
| Acero | 70 | Kg | 1.47 | 3150 | 4630.5 | |
| Conducto de Purga | | | | | | |
| Movimiento de tierra | 0.18 | m³ | 13.86 | 30.6 | 424.116 | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.08 | m³ | 77.84 | 0.4 | 31.136 | |
| Concreto | 0.09 | m³ | 139.23 | 4.05 | 563.8815 | |
| Encofrado y desencofrado | 0.3 | m² | 10.87 | 26.1 | 283.707 | |
| Acero | 70 | Kg | 1.47 | 283.5 | 416.745 | |
| CONDUCCIÓN | | | | | \$1,603,326.02 | S/. 5,226,842.82 |
| Movimiento de tierra | | m³ | 9.43 | 31025 | 292565.75 | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.05 | m³ | 77.84 | 284.4 | 22137.696 | |
| Concreto relleno | 0.1 | m³ | 77.84 | 568.8 | 44275.392 | |
| Concreto canal de conducción | 0.85 | m³ | 89.7 | 4834.8 | 433681.56 | |
| Encofrado y desencofrado | | m² | 10.87 | 28810 | 313164.7 | |
| Acero | 70 | Kg | 1.47 | 338436 | 497500.92 | |
| CÁMARA DE CARGA | | | | | \$16,646.44 | S/. 54,267.39 |
| Movimiento de tierra | | m³ | 12.75 | 205 | 2613.75 | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.05 | m³ | 77.84 | 2.6 | 202.384 | |
| Concreto relleno lat | 0.1 | m³ | 77.84 | 5.2 | 404.768 | |
| Concreto cámara de carga | 0.85 | m³ | 110.27 | 44.2 | 4873.934 | |
| Encofrado y desencofrado | | m² | 10.87 | 215 | 2337.05 | |
| Acero | 70 | Kg | 1.47 | 3094 | 4548.18 | |
| Aliviadero | | | | | | |
| Movimiento de tierra | | m³ | 9.43 | 10.25 | 96.6575 | |
| Obras de concreto anclajes | | | | | | |
| Concreto solado | 0.16 | m³ | 77.84 | 0.416 | 32.38144 | |
| Concreto | 0.1 | m³ | 217.07 | 4.42 | 959.4494 | |
| Encofrado y desencofrado | 0.04 | m² | 14.31 | 8.6 | 123.066 | |
| Acero | 70 | Kg | 1.47 | 309.4 | 454.818 | |
| TUBERÍA FORZADA | | | | | \$6,528,192.50 | S/. 21,281,907.56 |
| Movimiento de tierra | | | | | | |
| Excavacion con equipo en material suelto para la estructura | 0.6 | m³ | 3.05 | 40.2 | S/. 122.61 | |
| Excavacion con equipo en roca fija para la estructura | 0.4 | m³ | 9.54 | 26.8 | S/. 255.67 | |
| Anclajes | | | | | | |
| Movimiento de tierra | 0.4 | m³ | 22.39 | 16.08 | S/. 360.03 | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.6 | m³ | 77.84 | 9.648 | S/. 751.00 | |
| Concreto anclajes | 0.3 | m³ | 139.23 | 4.824 | S/. 671.65 | |
| Encofrado y desencofrado | 0.4 | m² | 14.31 | 6.432 | S/. 92.04 | |
| Acero | 55 | Kg | 1.47 | 265.32 | S/. 390.02 | |
| Apoyos | | | | | | |
| Movimiento de tierra | 0.75 | m³ | 41.97 | 12.06 | S/. 506.16 | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.95 | m³ | 77.84 | 9.1656 | S/. 713.45 | |
| Concreto apoyos | 0.95 | m³ | 139.23 | 4.5828 | S/. 638.06 | |
| Encofrado y desencofrado | 0.8 | m² | 14.31 | 5.1456 | S/. 73.63 | |
| Acero | 55 | Kg | 1.47 | 252.054 | S/. 370.52 | |
| Tubería | | | | | | |
| Tubería | | Kg | 4.5 | 1449262 | S/. 6,521,679.00 | |
| Pantalón | | | | | | |
| Movimiento de tierra | | m³ | 35.89 | | | |
| Excavacion con equipo en roca fija para la estructura | 0.4 | m³ | 9.54 | 4.824 | S/. 46.02 | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.85 | m³ | 77.84 | 7.79076 | S/. 606.43 | |
| Concreto apoyos | 0.85 | m³ | 139.23 | 3.89538 | S/. 542.35 | |
| Encofrado y desencofrado | 0.8 | m² | 14.31 | 4.11648 | S/. 58.91 | |
| Acero | 55 | Kg | 1.47 | 214.2459 | S/. 314.94 | |
| CASA DE MÁQUINAS | | | | | \$125,834.71 | S/. 410,221.14 |
| Movimiento de tierra | | | | | | |
| Excavación masiva con equipo en material suelto | 0.17 | m³ | - | - | 30691.39163 | |
| Excavación con equipo en roca fija para la estructura | 0.6 | m³ | - | - | 18414.83498 | |
| Perfilado y compactado | 0.25 | m³ | - | - | 7672.847908 | |
| Perfilado y compactado | 0.15 | m³ | - | - | 4603.708745 | |
| Obras de concreto | | | | | | |
| Instalaciones sanitarias | 0.46 | glb | - | - | 83047.29501 | |
| Instalaciones eléctricas | 0.014 | glb | - | - | 2527.52637 | |
| Caseta Vigilancia | 0.011 | glb | - | - | 1985.913576 | |
| | 0.042 | glb | - | - | 7582.57911 | |
| Costo Casa máquinas - Ratio | 180537.5978 | | | | | |
| EQUIPO ELECTROMECÁNICO | | | | | \$2,511,122.00 | S/. 8,186,257.72 |
| Turbina pelton- Incluye turbina control, valvula, generador, sistema de control, estacion de conmutacion, transformador. | | glb | - | - | 2511122 | |
| CONDUCCIÓN DESCARGA | | | | | \$2,305.09 | S/. 7,514.60 |
| Movimiento de tierra | | m³ | 9.43 | 42 | 396.06 | |
| Obras de concreto | | | | | | |
| Concreto solado | 0.05 | m³ | 77.84 | 0.385 | 29.9684 | |
| Concreto relleno | 0.1 | m³ | 77.84 | 0.77 | 59.9368 | |
| Concreto canal de conducción | 0.85 | m³ | 110.27 | 6.545 | 721.71715 | |
| Encofrado y desencofrado | | m² | 10.87 | 39 | 423.93 | |
| Acero | 70 | Kg | 1.47 | 458.15 | 673.4805 | |
| LINEA DE TRANSMISION 22.9kV | | | | | \$264,703.36 | S/. 862,932.95 |
| Red aérea conductor de aleación de aluminio 3x120mm2 | | km | 12352 | 21.43 | 264703.36 | |
| COSTO TOTAL | | | | | | S/. 36,582,713.49 |

Costo total caudal 1.38 m³/s

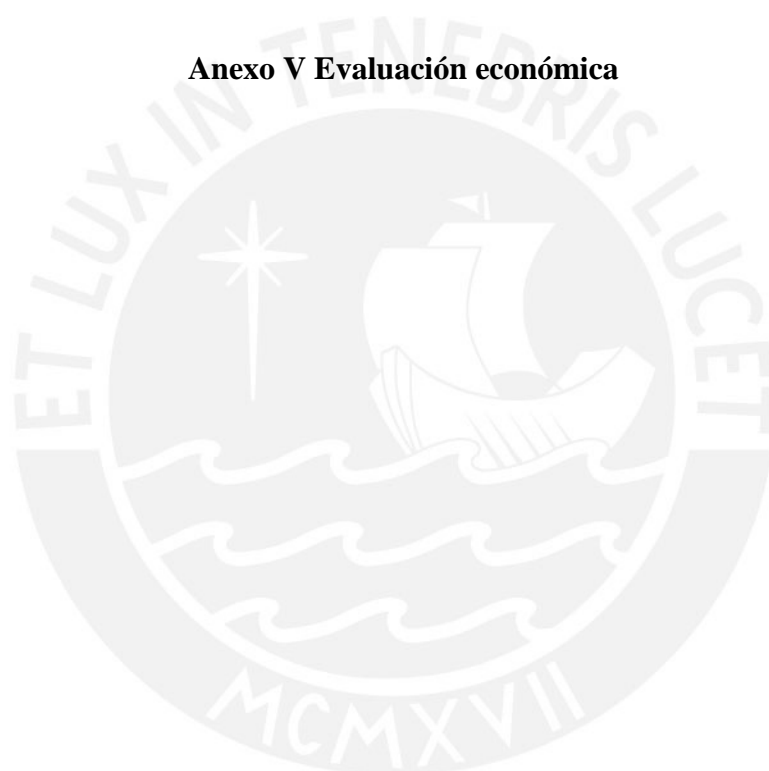
| Descripción | Ratio | Unidad | Precio(\$/u) | Metrado | Parcial | Subtotal | |
|--|-------------|--------|--------------|-----------|------------------|----------------|--------------------------|
| | | | | | | \$ (dolares) | S/. (soles) |
| OBRAS CIVILES | | | | | | | |
| BOCATOMA | | | | | | \$148,605.98 | S/. 484,455.48 |
| Movimiento de tierra | | m³ | 13.98 | 1051 | 14692.98 | | |
| Obras de concreto | | | | | | | |
| Concreto solado | 0.1 | m³ | 77.84 | 52.54 | 4089.7136 | | |
| Concreto bocatoma | 0.9 | m³ | 110.27 | 472.86 | 52142.2722 | | |
| Encofrado y desencofrado | | m² | 10.87 | 1606 | 17457.22 | | |
| Acero | 70 | Kg | 1.47 | 33100.2 | 48657.294 | | |
| Aliviadero | | | | | | | |
| Movimiento de tierra | 0.07 | m³ | 1.82 | 73.57 | 133.8974 | | |
| Obras de concreto | | | | | | | |
| Concreto solado | 0.16 | m³ | 77.84 | 8.4064 | 654.354176 | | |
| Concreto | 0.1 | m³ | 110.27 | 47.286 | 5214.22722 | | |
| Encofrado y desencofrado | 0.04 | m² | 10.87 | 64.24 | 698.2888 | | |
| Acero | 70 | Kg | 1.47 | 3310.02 | 4865.7294 | | |
| DESARENADOR | | | | | | \$13,740.30 | S/. 44,793.36 |
| Movimiento de tierra | | m³ | 12.75 | 160 | 2040 | | |
| Obras de concreto | | | | | | | |
| Concreto solado | 0.1 | m³ | 77.84 | 4.6 | 358.064 | | |
| Concreto desarenador | 0.9 | m³ | 110.27 | 41.4 | 4565.178 | | |
| Encofrado y desencofrado | | m² | 10.87 | 84 | 913.08 | | |
| Acero | 70 | Kg | 1.47 | 2898 | 4260.06 | | |
| Conducto de Purga | | | | | | | |
| Movimiento de tierra | 0.18 | m³ | 13.86 | 28.8 | 399.168 | | |
| Obras de concreto | | | | | | | |
| Concreto solado | 0.08 | m³ | 77.84 | 0.368 | 28.64512 | | |
| Concreto | 0.09 | m³ | 139.23 | 3.726 | 518.77098 | | |
| Encofrado y desencofrado | 0.3 | m² | 10.87 | 25.2 | 273.924 | | |
| Acero | 70 | Kg | 1.47 | 260.82 | 383.4054 | | |
| CONDUCCIÓN | | | | | | \$1,428,841.27 | S/. 4,658,022.55 |
| Movimiento de tierra | | m³ | 9.43 | 28072 | 264718.96 | | |
| Obras de concreto | | | | | | | |
| Concreto solado | 0.05 | m³ | 77.84 | 277.05 | 21565.572 | | |
| Concreto relleno | 0.1 | m³ | 61.63 | 554.1 | 34149.183 | | |
| Concreto canal de conducción | 0.85 | m³ | 89.7 | 4709.85 | 422473.545 | | |
| Encofrado y desencofrado | | m² | 10.87 | 28072 | 305142.64 | | |
| Acero | 55 | Kg | 1.47 | 259041.75 | 380791.3725 | | |
| CÁMARA DE CARGA | | | | | | \$16,081.74 | S/. 52,426.46 |
| Movimiento de tierra | | m³ | 12.75 | 200 | 2550 | | |
| Obras de concreto | | | | | | | |
| Concreto solado | 0.05 | m³ | 77.84 | 2.5 | 194.6 | | |
| Concreto relleno lat | 0.1 | m³ | 77.84 | 5 | 389.2 | | |
| Concreto cámara de carga | 0.85 | m³ | 110.27 | 42.5 | 4686.475 | | |
| Encofrado y desencofrado | | m² | 10.87 | 210 | 2282.7 | | |
| Acero | 70 | Kg | 1.47 | 2975 | 4373.25 | | |
| Aliviadero | | | | | | | |
| Movimiento de tierra | | m³ | 9.43 | 10 | 94.3 | | |
| Obras de concreto anclajes | | | | | | | |
| Concreto solado | 0.16 | m³ | 77.84 | 0.4 | 31.136 | | |
| Concreto | 0.1 | m³ | 217.07 | 4.25 | 922.5475 | | |
| Encofrado y desencofrado | 0.04 | m² | 14.31 | 8.4 | 120.204 | | |
| Acero | 70 | Kg | 1.47 | 297.5 | 437.325 | | |
| TUBERÍA FORZADA | | | | | | \$6,302,147.70 | S/. 20,545,001.52 |
| Movimiento de tierra | | | | | | | |
| Excavacion con equipo en material suelto para la estructura | 0.6 | m³ | 3.05 | 76.8 | S/. 234.24 | | |
| Excavacion con equipo en roca fija para la estructura | 0.4 | m³ | 9.54 | 51.2 | S/. 488.45 | | |
| Anclajes | | | | | | | |
| Movimiento de tierra | 0.4 | m³ | 22.39 | 30.72 | S/. 687.82 | | |
| Obras de concreto | | | | | | | |
| Concreto solado | 0.6 | m³ | 77.84 | 18.432 | S/. 1,434.75 | | |
| Concreto anclajes | 0.3 | m³ | 139.23 | 9.216 | S/. 1,283.14 | | |
| Encofrado y desencofrado | 0.4 | m² | 14.31 | 12.288 | S/. 175.84 | | |
| Acero | 55 | Kg | 1.47 | 506.88 | S/. 745.11 | | |
| Apoyos | | | | | | | |
| Movimiento de tierra | 0.75 | m³ | 41.97 | 23.04 | S/. 966.99 | | |
| Obras de concreto | | | | | | | |
| Concreto solado | 0.95 | m³ | 77.84 | 17.5104 | S/. 1,363.01 | | |
| Concreto apoyos | 0.95 | m³ | 139.23 | 8.7552 | S/. 1,218.99 | | |
| Encofrado y desencofrado | 0.8 | m² | 14.31 | 9.8304 | S/. 140.67 | | |
| Acero | 55 | Kg | 1.47 | 481.536 | S/. 707.86 | | |
| Tubería | | | | | | | |
| Tubería | | Kg | 4.5 | 1397712 | S/. 6,289,704.00 | | |
| Pantalón | | | | | | | |
| Movimiento de tierra | | m³ | 35.89 | | | | |
| Excavacion con equipo en roca fija para la estructura | 0.4 | m³ | 9.54 | 9.216 | S/. 87.92 | | |
| Obras de concreto | | | | | | | |
| Concreto solado | 0.85 | m³ | 77.84 | 14.88384 | S/. 1,158.56 | | |
| Concreto apoyos | 0.85 | m³ | 139.23 | 7.44192 | S/. 1,036.14 | | |
| Encofrado y desencofrado | 0.8 | m² | 14.31 | 7.86432 | S/. 112.54 | | |
| Acero | 55 | Kg | 1.47 | 409.3056 | S/. 601.68 | | |
| CASA DE MÁQUINAS | | | | | | \$120,841.43 | S/. 393,943.05 |
| Movimiento de tierra | 0.17 | m³ | | | 29473.51873 | | |
| Excavación masiva con equipo en material suelto | 0.6 | m³ | - | - | 17684.11124 | | |
| Excavación con equipo en roca fija para la estructura | 0.25 | m³ | - | - | 7368.379683 | | |
| Perfilado y compactado | 0.15 | m³ | - | - | 4421.02781 | | |
| Obras de concreto | | | | | | | |
| Instalaciones sanitarias | 0.014 | glb | - | - | 79751.87421 | | |
| Instalaciones eléctricas | 0.011 | glb | - | - | 2427.230954 | | |
| Caseta Vigilancia | 0.042 | glb | - | - | 1907.110036 | | |
| Costo Casa máquinas - Ratio | 173373.6396 | | | | | | |
| EQUIPO ELECTROMECAÁNICO | | | | | | \$2,454,038.00 | S/. 8,000,163.88 |
| Turbina pelton- Incluye turbina control, valvula, generador, sistema de control, estacion de conmutacion, transformador. | | glb | - | - | 2454038 | | |
| CONDUCCIÓN DESCARGA | | | | | | \$2,217.93 | S/. 7,230.45 |
| Movimiento de tierra | | m³ | 9.43 | 38 | 358.34 | | |
| Obras de concreto | | | | | | | |
| Concreto solado | 0.05 | m³ | 77.84 | 0.375 | 29.19 | | |
| Concreto relleno | 0.1 | m³ | 77.84 | 0.75 | 58.38 | | |
| Concreto canal de conducción | 0.85 | m³ | 110.27 | 6.375 | 702.97125 | | |
| Encofrado y desencofrado | | m² | 10.87 | 38 | 413.06 | | |
| Acero | 70 | Kg | 1.47 | 446.25 | 655.9875 | | |
| LINEA DE TRANSMISION 22.9kV | | | | | | \$264,703.36 | S/. 862,932.95 |
| Red aérea conductor de aleación de aluminio 3x120mm2 | | km | 12352 | 21.43 | 264703.36 | | |
| COSTO TOTAL | | | | | | | S/. 35,048,969.71 |

Resumen costo directo de construcción

| Q (m³/s) | Bocatoma | Canal Aducción | Desarenador | Cámara de C. | Tub. Forzada | Cáma Máq | E. Electromecánico | Canal Descarga | Distribución Eléctrica | TOTAL |
|----------|-------------------------|----------------------------|------------------------|------------------------|-----------------------------|-------------------------|----------------------------|-----------------------|-------------------------|-------------------|
| 1.71 | S/. 551,943.81 1.32% | S/. 5,957,852.91 14.30% | S/. 60,917.44 0.15% | S/. 63,699.19 0.15% | S/. 24,634,307.75 59.12% | S/. 448,822.31 1.08% | S/. 9,076,870.16 21.78% | S/. 8,618.17 0.02% | S/. 862,932.95 2.07% | S/. 41,665,964.70 |
| 1.6 | S/. 541,934.10 1.37% | S/. 5,785,499.95 14.59% | S/. 55,484.58 0.14% | S/. 61,211.74 0.15% | S/. 23,278,673.91 58.71% | S/. 440,682.74 1.11% | S/. 8,616,887.42 21.73% | S/. 8,282.32 0.02% | S/. 862,932.95 2.18% | S/. 39,651,589.71 |
| 1.55 | S/. 532,922.68 1.38% | S/. 5,584,304.31 14.45% | S/. 53,710.39 0.14% | S/. 59,874.75 0.15% | S/. 22,658,373.44 58.64% | S/. 433,354.96 1.12% | S/. 8,445,111.50 21.86% | S/. 8,027.52 0.02% | S/. 862,932.95 2.23% | S/. 38,638,612.49 |
| 1.5 | S/. 567,609.44 1.49% | S/. 5,812,077.72 15.21% | S/. 55,744.13 0.15% | S/. 62,115.05 0.16% | S/. 22,034,792.71 57.66% | S/. 461,561.07 1.21% | S/. 8,349,443.54 21.85% | S/. 7,835.59 0.02% | S/. 862,932.95 2.26% | S/. 38,214,112.20 |
| 1.47 | S/. 521,435.58 1.40% | S/. 5,317,959.94 14.30% | S/. 50,069.87 0.13% | S/. 56,108.31 0.15% | S/. 21,658,914.93 58.24% | S/. 424,014.03 1.14% | S/. 8,292,536.98 22.30% | S/. 7,643.66 0.02% | S/. 862,932.95 2.32% | S/. 37,191,616.25 |
| 1.44 | S/. 504,473.63 1.38% | S/. 5,226,842.82 14.29% | S/. 48,295.68 0.13% | S/. 54,267.39 0.15% | S/. 21,281,907.56 58.17% | S/. 410,221.14 1.12% | S/. 8,186,257.72 22.38% | S/. 7,514.60 0.02% | S/. 862,932.95 2.36% | S/. 36,582,713.49 |
| 1.38 | S/. 484,455.48 1.38% | S/. 4,658,022.55 13.29% | S/. 44,793.36 0.13% | S/. 52,426.46 0.15% | S/. 20,545,001.52 58.62% | S/. 393,943.05 1.12% | S/. 8,000,163.88 22.83% | S/. 7,230.45 0.02% | S/. 862,932.95 2.46% | S/. 35,048,969.71 |



Anexo V Evaluación económica



Evaluación económica para el $Q=1.71m^3/s$

1. Descargas medias mensuales y anuales para el caudal de captación $1.71 m^3/s$ captadas en la bocatoma

Tabla de descargas medias generadas mensuales y anuales en la bocatoma (m^3/s)

| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1965 | 1.14 | 4.10 | 3.81 | 1.67 | 1.23 | 1.10 | 1.44 | 1.37 | 1.59 | 1.35 | 1.24 | 1.51 |
| 1966 | 4.01 | 3.19 | 3.71 | 2.43 | 0.99 | 1.53 | 1.41 | 1.48 | 1.70 | 1.81 | 1.63 | 1.76 |
| 1967 | 1.49 | 7.76 | 7.21 | 2.42 | 1.37 | 0.95 | 1.63 | 1.92 | 2.17 | 2.31 | 1.78 | 1.30 |
| 1968 | 1.55 | 1.19 | 2.46 | 1.80 | 0.75 | 0.89 | 1.02 | 1.21 | 1.38 | 1.05 | 1.17 | 0.93 |
| 1969 | 0.78 | 2.36 | 3.14 | 3.13 | 1.25 | 0.83 | 1.18 | 1.43 | 1.62 | 1.31 | 1.46 | 4.15 |
| 1970 | 6.02 | 3.09 | 3.20 | 2.97 | 2.00 | 1.36 | 1.53 | 1.54 | 2.10 | 1.99 | 1.40 | 2.72 |
| 1971 | 3.67 | 4.90 | 7.02 | 3.94 | 1.79 | 1.36 | 1.43 | 1.66 | 1.83 | 1.31 | 1.02 | 1.83 |
| 1972 | 4.83 | 4.12 | 8.48 | 5.07 | 1.90 | 1.60 | 1.64 | 1.50 | 1.68 | 1.47 | 1.02 | 2.41 |
| 1973 | 5.27 | 7.28 | 7.00 | 5.56 | 2.04 | 1.54 | 1.66 | 1.42 | 2.02 | 1.83 | 1.90 | 3.40 |
| 1974 | 3.95 | 4.49 | 5.59 | 2.69 | 0.98 | 1.52 | 1.57 | 1.67 | 1.79 | 1.69 | 1.15 | 1.27 |
| 1975 | 2.27 | 2.46 | 6.61 | 2.86 | 1.74 | 1.46 | 1.48 | 1.58 | 2.24 | 1.34 | 1.36 | 1.17 |
| 1976 | 2.74 | 4.80 | 4.44 | 2.56 | 1.10 | 1.32 | 1.45 | 1.56 | 1.72 | 1.21 | 0.91 | 1.77 |
| 1977 | 1.65 | 6.12 | 3.89 | 2.34 | 1.64 | 1.06 | 1.34 | 1.47 | 1.67 | 1.56 | 2.19 | 1.91 |
| 1978 | 2.11 | 4.77 | 2.88 | 1.82 | 1.16 | 1.09 | 1.18 | 1.39 | 1.49 | 1.56 | 1.08 | 1.65 |
| 1979 | 1.26 | 4.64 | 6.15 | 3.04 | 1.28 | 1.01 | 1.36 | 1.46 | 2.20 | 1.17 | 0.85 | 0.29 |
| 1980 | 2.27 | 2.00 | 3.73 | 2.57 | 1.08 | 1.15 | 1.20 | 1.11 | 1.88 | 1.32 | 1.96 | 2.01 |
| 1981 | 2.70 | 7.45 | 6.07 | 2.68 | 1.31 | 1.40 | 1.62 | 1.37 | 1.61 | 1.79 | 1.90 | 2.52 |
| 1982 | 2.29 | 7.79 | 3.39 | 1.80 | 1.48 | 1.02 | 1.37 | 2.09 | 1.59 | 1.68 | 2.09 | 1.56 |
| 1983 | 2.39 | 1.48 | 3.77 | 3.75 | 1.22 | 1.47 | 1.23 | 1.31 | 1.62 | 1.19 | 0.89 | 1.79 |
| 1984 | 2.52 | 8.75 | 6.87 | 4.19 | 2.02 | 1.62 | 1.44 | 1.50 | 1.86 | 1.91 | 1.60 | 3.45 |
| 1985 | 2.06 | 3.63 | 5.04 | 3.95 | 1.78 | 1.60 | 1.73 | 1.46 | 1.74 | 1.10 | 1.18 | 2.24 |
| 1986 | 4.60 | 5.11 | 6.85 | 5.15 | 2.35 | 1.83 | 1.68 | 1.53 | 1.78 | 1.40 | 1.20 | 1.71 |
| 1987 | 4.75 | 4.86 | 3.17 | 1.67 | 0.95 | 0.85 | 1.31 | 1.31 | 1.40 | 1.29 | 1.25 | 2.30 |
| 1988 | 3.87 | 5.54 | 3.43 | 4.01 | 1.73 | 1.45 | 1.39 | 1.24 | 1.43 | 1.27 | 0.77 | 0.87 |
| 1989 | 4.13 | 6.43 | 6.05 | 4.11 | 1.80 | 1.15 | 1.49 | 1.22 | 1.57 | 1.59 | 1.56 | 1.88 |
| 1990 | 2.64 | 1.58 | 1.88 | 1.29 | 0.49 | 1.42 | 1.04 | 1.22 | 1.56 | 1.40 | 2.86 | 2.34 |
| 1991 | 2.09 | 2.64 | 5.23 | 2.42 | 1.80 | 1.31 | 1.53 | 1.27 | 1.54 | 1.44 | 1.25 | 0.86 |
| 1992 | 1.56 | 0.91 | 2.48 | 1.77 | 0.87 | 0.74 | 1.08 | 1.22 | 1.26 | 1.39 | 0.81 | 0.57 |
| 1993 | 2.13 | 4.18 | 5.11 | 3.48 | 1.85 | 1.05 | 1.32 | 1.34 | 1.65 | 1.65 | 2.95 | 4.17 |
| 1994 | 4.88 | 5.44 | 5.37 | 5.33 | 2.63 | 2.00 | 1.66 | 1.55 | 1.90 | 1.32 | 1.58 | 1.70 |
| 1995 | 2.64 | 2.30 | 3.77 | 3.54 | 1.28 | 1.11 | 1.35 | 1.45 | 1.62 | 1.24 | 1.62 | 2.10 |
| 1996 | 3.72 | 5.75 | 5.17 | 3.71 | 1.60 | 1.23 | 1.33 | 1.57 | 1.67 | 1.27 | 1.32 | 1.10 |
| 1997 | 2.25 | 4.51 | 2.97 | 1.40 | 1.21 | 1.36 | 1.70 | 1.73 | 1.96 | 1.30 | 1.68 | 2.71 |
| 1998 | 4.95 | 5.20 | 4.88 | 2.78 | 1.31 | 1.07 | 1.41 | 1.36 | 1.58 | 1.37 | 1.24 | 0.88 |
| 1999 | 1.58 | 4.98 | 4.84 | 3.78 | 2.29 | 1.42 | 1.37 | 1.60 | 1.82 | 1.50 | 1.06 | 2.72 |
| 2000 | 4.43 | 6.03 | 5.55 | 2.80 | 2.29 | 1.50 | 1.79 | 1.55 | 1.82 | 2.12 | 1.59 | 2.68 |
| 2001 | 6.22 | 5.23 | 5.84 | 3.83 | 2.36 | 1.62 | 1.73 | 1.79 | 2.16 | 1.35 | 1.77 | 1.34 |
| 2002 | 1.29 | 3.39 | 5.31 | 3.38 | 1.44 | 1.04 | 1.46 | 1.63 | 1.80 | 1.37 | 1.93 | 2.44 |
| 2003 | 4.06 | 4.55 | 5.38 | 3.57 | 1.47 | 1.12 | 1.29 | 1.12 | 1.48 | 1.54 | 0.71 | 1.77 |
| 2004 | 0.86 | 3.58 | 3.23 | 2.71 | 1.10 | 0.81 | 1.51 | 1.15 | 1.31 | 1.25 | 2.13 | 3.12 |
| 2005 | 3.88 | 3.74 | 4.92 | 3.90 | 1.21 | 0.97 | 1.14 | 1.08 | 1.22 | 0.93 | 0.70 | 1.15 |
| 2006 | 2.83 | 4.19 | 5.68 | 4.63 | 1.53 | 1.22 | 1.41 | 1.54 | 1.56 | 1.31 | 1.39 | 2.37 |
| 2007 | 4.56 | 4.81 | 5.82 | 4.31 | 1.84 | 1.41 | 1.46 | 1.60 | 1.97 | 1.60 | 1.26 | 1.01 |
| 2008 | 4.33 | 5.60 | 4.58 | 2.74 | 1.16 | 0.88 | 1.32 | 1.37 | 1.26 | 0.91 | 0.92 | 1.16 |
| 2009 | 3.49 | 6.71 | 5.79 | 3.45 | 1.57 | 1.18 | 1.50 | 1.44 | 1.63 | 1.78 | 3.07 | 4.49 |
| 2010 | 7.15 | 4.29 | 4.65 | 4.01 | 1.71 | 1.91 | 1.84 | 1.58 | 1.60 | 1.20 | 1.54 | 2.75 |
| 2011 | 3.64 | 6.61 | 8.03 | 6.12 | 2.42 | 1.60 | 1.65 | 1.56 | 1.99 | 2.01 | 1.78 | 1.47 |
| 2012 | 3.37 | 6.49 | 5.47 | 4.49 | 1.73 | 1.06 | 1.35 | 1.19 | 1.44 | 1.27 | 1.16 | 2.51 |
| 2013 | 0.96 | 6.77 | 6.79 | 2.88 | 1.38 | 1.53 | 1.67 | 1.78 | 2.07 | 1.93 | 1.69 | 2.83 |
| 2014 | 3.51 | 3.79 | 5.41 | 3.18 | 1.71 | 1.75 | 1.43 | 1.37 | 1.76 | 1.25 | 0.96 | 1.68 |
| 2015 | 3.94 | 4.51 | 5.27 | 3.47 | 1.91 | 1.02 | 1.64 | 1.48 | 1.52 | 1.59 | 1.20 | 1.22 |
| 2016 | 2.38 | 1.58 | 3.76 | 2.66 | 1.73 | 1.42 | 1.87 | 1.51 | 1.87 | 1.32 | 0.92 | 0.81 |
| 2017 | 0.93 | 2.46 | 4.14 | 1.91 | 1.02 | 1.04 | 1.55 | 1.73 | 2.04 | 1.39 | 1.21 | 1.05 |
| 2018 | 3.13 | 4.54 | 3.12 | 2.52 | 1.18 | 0.85 | 1.04 | 1.59 | 2.09 | 1.86 | 1.54 | 3.61 |
| 2019 | 1.19 | 4.59 | 3.29 | 2.26 | 1.59 | 1.06 | 1.21 | 1.49 | 1.50 | 1.44 | 1.42 | 2.14 |
| 2020 | 1.66 | 4.93 | 3.01 | 2.91 | 1.27 | 1.35 | 1.50 | 1.26 | 1.80 | 1.23 | 1.66 | 3.13 |
| 2021 | 2.84 | 3.70 | 4.55 | 4.62 | 2.30 | 1.76 | 1.85 | 1.47 | 1.62 | 1.04 | 1.52 | 2.78 |
| 2022 | 2.37 | 4.13 | 2.91 | 3.57 | 2.01 | 2.08 | 1.86 | 2.02 | 2.50 | 2.23 | 3.39 | 4.22 |
| 2023 | 6.12 | 2.07 | 4.39 | 2.41 | 1.40 | 1.08 | 1.25 | 1.12 | 1.31 | 1.22 | 1.28 | 2.14 |
| 2024 | 2.99 | 4.99 | 5.78 | 2.39 | 0.90 | 0.64 | 0.94 | 1.21 | 1.68 | 1.34 | 0.72 | 0.24 |
| 2025 | 2.35 | 5.41 | 4.02 | 1.85 | 1.38 | 1.40 | 1.36 | 1.12 | 1.38 | 1.43 | 1.70 | 1.51 |
| 2026 | 4.17 | 5.80 | 5.50 | 3.06 | 1.88 | 1.51 | 1.53 | 1.40 | 1.82 | 1.70 | 1.20 | 1.30 |
| 2027 | 2.60 | 5.61 | 9.23 | 5.03 | 2.35 | 1.47 | 1.38 | 1.64 | 1.66 | 2.02 | 2.33 | 1.86 |
| 2028 | 1.52 | 2.90 | 3.91 | 2.23 | 1.31 | 1.10 | 1.31 | 1.35 | 1.70 | 1.55 | 1.48 | 0.80 |
| 2029 | 1.95 | 1.59 | 2.21 | 1.67 | 0.58 | 1.03 | 1.11 | 1.32 | 1.64 | 1.20 | 1.42 | 3.31 |

2. Volúmenes turbinados mensuales y anuales en la minicentral hidroeléctrica en m³

Tabla de volúmenes turbinados mensuales y anuales (m³)

| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1965 | 3,057,966 | 4,136,832 | 4,580,064 | 4,316,120 | 3,281,247 | 2,860,837 | 3,863,259 | 3,656,554 | 4,114,986 | 3,613,140 | 3,214,966 | 4,055,119 |
| 1966 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 2,651,354 | 3,960,720 | 3,787,946 | 3,950,960 | 4,399,895 | 4,580,064 | 4,228,713 | 4,580,064 |
| 1967 | 3,985,890 | 4,136,832 | 4,580,064 | 4,432,320 | 3,664,660 | 2,456,663 | 4,369,912 | 4,580,064 | 4,432,320 | 4,580,064 | 4,432,320 | 3,482,416 |
| 1968 | 4,159,875 | 2,877,373 | 4,580,064 | 4,432,320 | 2,007,768 | 2,297,644 | 2,719,867 | 3,252,601 | 3,578,296 | 2,805,234 | 3,022,818 | 2,481,998 |
| 1969 | 2,093,795 | 4,136,832 | 4,580,064 | 4,432,320 | 3,336,020 | 2,138,625 | 3,164,900 | 3,827,720 | 4,194,496 | 3,496,747 | 3,791,410 | 4,580,064 |
| 1970 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 3,523,417 | 4,102,892 | 4,135,820 | 4,432,320 | 4,580,064 | 3,632,391 | 4,580,064 |
| 1971 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 3,530,043 | 3,829,026 | 4,457,613 | 4,432,320 | 3,517,287 | 2,631,895 | 4,580,064 |
| 1972 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 4,146,242 | 4,383,605 | 4,005,733 | 4,360,141 | 3,928,086 | 2,638,521 | 4,580,064 |
| 1973 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 3,980,597 | 4,438,379 | 3,814,027 | 4,432,320 | 4,580,064 | 4,432,320 | 4,580,064 |
| 1974 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 2,623,968 | 3,927,591 | 4,198,746 | 4,464,460 | 4,432,320 | 4,523,746 | 2,983,063 | 3,409,922 |
| 1975 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 3,795,075 | 3,959,113 | 4,231,673 | 4,432,320 | 3,599,447 | 3,526,378 | 3,127,195 |
| 1976 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 2,938,914 | 3,430,656 | 3,876,953 | 4,176,900 | 4,432,320 | 3,236,574 | 2,353,612 | 4,580,064 |
| 1977 | 4,413,604 | 4,136,832 | 4,580,064 | 4,432,320 | 4,390,406 | 2,741,572 | 3,575,700 | 3,937,267 | 4,340,263 | 4,174,566 | 4,432,320 | 4,580,064 |
| 1978 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 3,096,387 | 2,834,334 | 3,151,207 | 3,731,867 | 3,869,831 | 4,167,719 | 2,804,166 | 4,432,088 |
| 1979 | 3,376,940 | 4,136,832 | 4,580,064 | 4,432,320 | 3,431,874 | 2,622,308 | 3,637,320 | 3,903,033 | 4,432,320 | 3,127,027 | 2,201,218 | 763,890 |
| 1980 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 2,904,681 | 2,973,475 | 3,226,520 | 2,965,041 | 4,432,320 | 3,524,133 | 4,432,320 | 4,580,064 |
| 1981 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 3,520,880 | 3,629,430 | 4,328,832 | 3,677,094 | 4,167,992 | 4,580,064 | 4,432,320 | 4,580,064 |
| 1982 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 3,952,220 | 2,655,437 | 3,678,400 | 4,580,064 | 4,108,360 | 4,503,206 | 4,432,320 | 4,171,110 |
| 1983 | 4,580,064 | 3,571,445 | 4,580,064 | 4,432,320 | 3,267,554 | 3,801,700 | 3,281,293 | 3,519,621 | 4,207,747 | 3,188,647 | 2,300,605 | 4,580,064 |
| 1984 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 4,205,874 | 3,856,413 | 4,012,580 | 4,432,320 | 4,580,064 | 4,142,578 | 4,580,064 |
| 1985 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 4,159,494 | 4,580,064 | 3,903,033 | 4,432,320 | 2,955,861 | 3,055,947 | 4,580,064 |
| 1986 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 4,432,320 | 4,506,845 | 4,094,740 | 4,432,320 | 3,756,920 | 3,122,205 | 4,580,064 |
| 1987 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 2,534,961 | 2,191,631 | 3,507,233 | 3,512,774 | 3,624,677 | 3,448,820 | 3,234,843 | 4,580,064 |
| 1988 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 3,761,946 | 3,733,173 | 3,327,914 | 3,697,561 | 3,407,740 | 1,995,819 | 2,329,761 |
| 1989 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 2,980,101 | 3,979,653 | 3,273,141 | 4,061,980 | 4,249,879 | 4,056,442 | 4,580,064 |
| 1990 | 4,580,064 | 3,826,811 | 4,580,064 | 3,347,974 | 1,323,102 | 3,675,810 | 2,774,640 | 3,273,141 | 4,035,476 | 3,750,073 | 4,432,320 | 4,580,064 |
| 1991 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 3,404,152 | 4,089,199 | 3,389,534 | 3,989,096 | 3,845,926 | 3,234,843 | 2,293,514 |
| 1992 | 4,188,873 | 2,196,397 | 4,580,064 | 4,432,320 | 2,343,255 | 1,919,973 | 3,897,880 | 3,279,987 | 3,273,510 | 3,715,840 | 2,108,457 | 1,532,326 |
| 1993 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 2,715,069 | 3,527,773 | 3,601,780 | 4,287,257 | 4,407,353 | 4,432,320 | 4,580,064 |
| 1994 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 4,432,320 | 4,458,919 | 4,156,360 | 4,432,320 | 3,544,673 | 4,089,571 | 4,555,328 |
| 1995 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 3,438,720 | 2,887,340 | 3,603,086 | 3,882,493 | 4,194,496 | 3,332,427 | 4,208,836 | 4,580,064 |
| 1996 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,280,859 | 3,185,501 | 3,562,006 | 4,204,286 | 4,320,386 | 3,414,587 | 3,413,740 | 2,953,210 |
| 1997 | 4,580,064 | 4,136,832 | 4,580,064 | 3,621,580 | 3,233,320 | 3,156,791 | 4,554,772 | 4,580,064 | 4,432,320 | 3,476,207 | 4,361,229 | 4,580,064 |
| 1998 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 3,514,034 | 2,781,327 | 3,774,253 | 3,642,860 | 4,088,483 | 3,661,067 | 3,221,592 | 2,366,008 |
| 1999 | 4,232,369 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 3,682,436 | 3,657,860 | 4,279,600 | 4,432,320 | 4,023,940 | 2,744,534 | 4,580,064 |
| 2000 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 3,881,210 | 4,580,064 | 4,156,360 | 4,432,320 | 4,580,064 | 4,116,074 | 4,580,064 |
| 2001 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 4,199,248 | 4,580,064 | 4,580,064 | 4,432,320 | 3,606,293 | 4,432,320 | 3,583,908 |
| 2002 | 3,456,683 | 4,136,832 | 4,580,064 | 4,432,320 | 3,870,060 | 2,695,192 | 3,897,493 | 4,368,606 | 4,432,320 | 3,674,760 | 4,432,320 | 4,580,064 |
| 2003 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 3,945,373 | 2,900,592 | 3,452,460 | 3,012,968 | 3,830,077 | 4,126,640 | 1,850,051 | 4,580,064 |
| 2004 | 2,304,028 | 4,136,832 | 4,580,064 | 4,432,320 | 2,945,761 | 2,092,244 | 4,048,119 | 3,067,741 | 3,386,148 | 3,359,814 | 4,432,320 | 4,580,064 |
| 2005 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 3,233,320 | 2,503,044 | 3,041,660 | 2,903,421 | 3,154,245 | 2,483,441 | 1,803,670 | 3,083,699 |
| 2006 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,109,693 | 3,172,249 | 3,767,406 | 4,122,127 | 4,042,102 | 3,517,287 | 3,605,888 | 4,580,064 |
| 2007 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 3,642,681 | 3,911,186 | 4,272,753 | 4,432,320 | 4,277,266 | 3,474,598 | 2,706,730 |
| 2008 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 3,116,927 | 2,271,141 | 3,541,466 | 3,656,554 | 3,253,632 | 2,442,361 | 2,373,489 | 3,105,447 |
| 2009 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,198,699 | 3,059,611 | 4,020,732 | 3,848,260 | 4,234,250 | 4,580,064 | 4,432,320 | 4,580,064 |
| 2010 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 4,432,320 | 4,580,064 | 4,224,826 | 4,154,741 | 3,216,034 | 3,996,810 | 4,580,064 |
| 2011 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 4,139,616 | 4,417,839 | 4,183,746 | 4,432,320 | 4,580,064 | 4,432,320 | 3,939,129 |
| 2012 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 2,748,198 | 3,603,086 | 3,177,288 | 3,724,064 | 3,414,587 | 3,002,940 | 4,580,064 |
| 2013 | 2,572,256 | 4,136,832 | 4,580,064 | 4,432,320 | 3,692,047 | 3,960,720 | 4,486,305 | 4,580,064 | 4,432,320 | 4,580,064 | 4,381,106 | 4,580,064 |
| 2014 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,575,266 | 4,432,320 | 3,842,719 | 3,677,094 | 4,432,320 | 3,346,120 | 2,479,502 | 4,497,333 |
| 2015 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 2,642,185 | 4,404,145 | 3,964,653 | 3,936,089 | 4,263,573 | 3,122,205 | 3,272,183 |
| 2016 | 4,580,064 | 3,826,811 | 4,580,064 | 4,432,320 | 4,580,064 | 3,669,184 | 4,580,064 | 4,039,967 | 4,432,320 | 3,530,980 | 2,380,115 | 2,177,523 |
| 2017 | 2,485,263 | 4,136,832 | 4,580,064 | 4,432,320 | 2,719,821 | 2,688,566 | 4,164,512 | 4,580,064 | 4,432,320 | 3,729,533 | 3,128,830 | 2,800,972 |
| 2018 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 3,164,854 | 2,191,631 | 2,795,180 | 4,245,366 | 4,432,320 | 4,580,064 | 3,983,558 | 4,580,064 |
| 2019 | 3,181,206 | 4,136,832 | 4,580,064 | 4,432,320 | 4,260,319 | 2,754,824 | 3,240,213 | 3,978,347 | 3,889,709 | 3,866,466 | 3,692,023 | 4,580,064 |
| 2020 | 4,442,602 | 4,136,832 | 4,580,064 | 4,432,320 | 3,390,794 | 3,496,914 | 4,020,732 | 3,382,687 | 4,432,320 | 3,305,040 | 4,308,223 | 4,580,064 |
| 2021 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 4,432,320 | 4,580,064 | 3,937,267 | 4,187,870 | 2,784,694 | 3,943,804 | 4,580,064 |
| 2022 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 4,432,320 | 4,580,064 | 4,580,064 | 4,432,320 | 4,580,064 | 4,432,320 | 4,580,064 |
| 2023 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 3,753,667 | 2,807,830 | 3,336,067 | 3,012,968 | 3,392,774 | 3,277,654 | 3,314,353 | 4,580,064 |
| 2024 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 2,398,028 | 1,654,941 | 2,528,161 | 3,252,601 | 4,366,766 | 3,585,753 | 1,856,677 | 0 |
| 2025 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 3,685,200 | 3,616,178 | 3,637,320 | 3,006,121 | 3,565,045 | 3,839,080 | 4,407,610 | 4,047,870 |
| 2026 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 3,914,339 | 4,096,046 | 3,759,254 | 4,432,320 | 4,544,286 | 3,102,327 | 3,475,167 |
| 2027 | 4,580,064 | 4,136,832 | 4,580,064 | 4,432,320 | 4,580,064 | 3,821,578 | 3,698,939 | 4,382,300 | 4,293,883 | 4,580,064 | 4,432,320 | 4,580,064 |
| 2028 | 4,080,132 | 4,136,832 | 4,580,064 | 4,432,320 | 3,514,034 | 2,860,837 | 3,514,080 | 3,622,320 | 4,406,521 | 4,147,180 | 3,824,539 | 2,141,276 |
| 2029 | 4,580,064 | 3,846,455 | 4,580,064 | 4,330,151 | 1,555,889 | 2,675,314 | 2,966,347 | 3,526,467 | 4,240,876 | 3,202,340 | 3,692,023 | 4,580,064 |

3. Energía mensual y anual generada en la minicentral en kWh

Tabla de energía generada en la minicentral (kWh)

| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1965 | 3,547,456 | 4,799,017 | 5,313,198 | 5,007,004 | 3,806,478 | 3,318,773 | 4,481,654 | 4,241,861 | 4,773,675 | 4,191,498 | 3,729,587 | 4,704,225 |
| 1966 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 3,075,758 | 4,594,715 | 4,394,285 | 4,583,393 | 5,104,190 | 5,313,198 | 4,905,606 | 5,313,198 |
| 1967 | 4,623,913 | 4,799,017 | 5,313,198 | 5,141,804 | 4,251,265 | 2,849,903 | 5,069,407 | 5,313,198 | 5,141,804 | 5,313,198 | 5,141,804 | 4,039,849 |
| 1968 | 4,825,749 | 3,337,956 | 5,313,198 | 5,141,804 | 2,329,153 | 2,665,429 | 3,155,238 | 3,773,247 | 4,151,076 | 3,254,270 | 3,506,682 | 2,879,293 |
| 1969 | 2,428,950 | 4,799,017 | 5,313,198 | 5,141,804 | 3,870,019 | 2,480,956 | 3,671,508 | 4,440,426 | 4,865,911 | 4,056,473 | 4,398,304 | 5,313,198 |
| 1970 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 4,087,412 | 4,759,645 | 4,797,843 | 5,141,804 | 5,313,198 | 4,213,830 | 5,313,198 |
| 1971 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 4,095,099 | 4,441,941 | 5,171,146 | 5,141,804 | 4,080,301 | 3,053,185 | 5,313,198 |
| 1972 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 4,809,934 | 5,085,292 | 4,646,934 | 5,058,071 | 4,556,858 | 3,060,871 | 5,313,198 |
| 1973 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,093,181 | 4,617,774 | 4,148,833 | 4,424,541 | 5,141,804 | 5,141,804 | 5,141,804 | 5,313,198 |
| 1974 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 3,043,988 | 4,556,283 | 4,870,842 | 5,179,088 | 5,141,804 | 5,247,865 | 3,460,564 | 3,955,751 |
| 1975 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 4,402,555 | 4,592,850 | 4,909,040 | 5,141,804 | 4,175,613 | 4,090,848 | 3,627,768 |
| 1976 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 3,409,348 | 3,979,803 | 4,497,539 | 4,845,499 | 5,141,804 | 3,754,654 | 2,730,356 | 5,313,198 |
| 1977 | 5,120,093 | 4,799,017 | 5,313,198 | 5,141,804 | 5,093,181 | 3,180,418 | 4,148,064 | 4,567,508 | 5,035,012 | 4,842,792 | 5,141,804 | 5,313,198 |
| 1978 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 3,592,028 | 3,288,027 | 3,655,622 | 4,329,229 | 4,489,278 | 4,834,849 | 3,253,031 | 5,141,535 |
| 1979 | 3,917,488 | 4,799,017 | 5,313,198 | 5,141,804 | 3,981,216 | 3,042,063 | 4,219,548 | 4,527,795 | 5,141,804 | 3,627,573 | 2,553,569 | 886,166 |
| 1980 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 3,369,635 | 3,449,442 | 3,742,991 | 3,439,657 | 5,141,804 | 4,088,244 | 5,141,804 | 5,313,198 |
| 1981 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 4,084,470 | 4,210,395 | 5,021,751 | 4,265,688 | 4,835,166 | 5,313,198 | 5,141,804 | 5,313,198 |
| 1982 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 4,584,854 | 3,080,495 | 4,267,203 | 5,313,198 | 4,765,988 | 5,224,037 | 5,141,804 | 4,838,782 |
| 1983 | 5,313,198 | 4,143,128 | 5,313,198 | 5,141,804 | 3,790,593 | 4,410,241 | 3,806,532 | 4,083,008 | 4,881,284 | 3,699,056 | 2,668,865 | 5,313,198 |
| 1984 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 4,879,111 | 4,473,711 | 4,654,876 | 5,141,804 | 5,313,198 | 4,805,683 | 5,313,198 |
| 1985 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 4,825,306 | 5,313,198 | 4,527,795 | 5,141,804 | 3,429,007 | 3,545,114 | 5,313,198 |
| 1986 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 5,141,804 | 5,228,259 | 4,750,188 | 5,141,804 | 4,358,293 | 3,621,978 | 5,313,198 |
| 1987 | 5,313,198 | 4,799,017 | 5,313,198 | 5,015,143 | 2,940,734 | 2,542,447 | 4,068,638 | 4,075,066 | 4,204,881 | 4,000,875 | 3,752,647 | 5,313,198 |
| 1988 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 4,364,123 | 4,330,744 | 3,860,615 | 4,289,432 | 3,953,219 | 2,315,291 | 2,702,687 |
| 1989 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 3,457,128 | 4,092,466 | 4,178,320 | 4,973,521 | 5,112,840 | 5,141,804 | 5,313,198 |
| 1990 | 5,313,198 | 4,439,371 | 5,313,198 | 3,883,886 | 1,534,892 | 4,264,200 | 3,218,779 | 3,797,075 | 4,681,438 | 4,350,350 | 5,141,804 | 5,313,198 |
| 1991 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 3,949,057 | 4,743,760 | 3,932,099 | 4,627,633 | 4,461,546 | 3,752,647 | 2,660,638 |
| 1992 | 4,859,388 | 2,547,975 | 5,313,198 | 5,141,804 | 2,718,341 | 2,227,305 | 3,361,746 | 3,805,017 | 3,797,502 | 4,310,637 | 2,445,959 | 1,777,607 |
| 1993 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 4,149,672 | 4,092,466 | 4,178,320 | 4,973,521 | 5,112,840 | 5,141,804 | 5,313,198 |
| 1994 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 5,141,804 | 5,172,661 | 4,821,671 | 5,141,804 | 4,112,072 | 4,744,192 | 5,284,502 |
| 1995 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 3,989,158 | 3,349,518 | 4,179,835 | 4,503,967 | 4,865,911 | 3,865,851 | 4,882,547 | 5,313,198 |
| 1996 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 4,966,099 | 3,695,406 | 4,132,179 | 4,877,269 | 5,011,953 | 3,961,162 | 3,960,179 | 3,425,932 |
| 1997 | 5,313,198 | 4,799,017 | 5,313,198 | 4,201,289 | 3,750,880 | 4,079,726 | 5,283,857 | 5,313,198 | 5,141,804 | 4,032,646 | 5,059,334 | 5,313,198 |
| 1998 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 4,076,527 | 3,226,536 | 4,378,400 | 4,225,975 | 4,742,929 | 4,247,096 | 3,737,274 | 2,744,736 |
| 1999 | 4,909,847 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 4,271,886 | 4,243,375 | 4,964,638 | 5,141,804 | 4,668,054 | 3,183,853 | 5,313,198 |
| 2000 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 4,502,478 | 5,313,198 | 4,821,671 | 5,141,804 | 5,313,198 | 4,774,937 | 5,313,198 |
| 2001 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 4,871,425 | 5,313,198 | 5,313,198 | 5,141,804 | 4,183,555 | 5,141,804 | 4,157,586 |
| 2002 | 4,009,997 | 4,799,017 | 5,313,198 | 5,141,804 | 4,489,543 | 3,126,613 | 4,521,367 | 5,067,892 | 5,141,804 | 4,262,981 | 5,141,804 | 5,313,198 |
| 2003 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 4,576,911 | 3,364,891 | 4,005,097 | 3,495,255 | 4,443,160 | 4,787,193 | 2,146,190 | 5,313,198 |
| 2004 | 2,672,835 | 4,799,017 | 5,313,198 | 5,141,804 | 3,417,291 | 2,427,151 | 4,696,104 | 3,558,796 | 3,928,171 | 3,897,621 | 5,141,804 | 5,313,198 |
| 2005 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 3,750,880 | 2,903,708 | 3,528,541 | 3,368,174 | 3,659,147 | 2,880,967 | 2,092,385 | 3,577,309 |
| 2006 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 4,767,534 | 3,680,033 | 4,370,457 | 4,781,958 | 4,689,124 | 4,080,301 | 4,183,085 | 5,313,198 |
| 2007 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 4,225,768 | 4,537,252 | 4,956,695 | 5,141,804 | 4,961,931 | 3,798,765 | 3,139,998 |
| 2008 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 3,615,856 | 2,634,684 | 4,108,351 | 4,241,861 | 3,774,443 | 2,833,312 | 2,753,415 | 3,602,538 |
| 2009 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 4,870,788 | 3,549,365 | 4,664,334 | 4,464,254 | 4,912,030 | 5,313,198 | 5,141,804 | 5,313,198 |
| 2010 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 5,141,804 | 5,313,198 | 4,901,097 | 4,819,793 | 3,730,826 | 4,636,582 | 5,313,198 |
| 2011 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 4,802,247 | 5,125,005 | 4,853,442 | 5,141,804 | 5,313,198 | 5,141,804 | 4,569,668 |
| 2012 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 3,188,104 | 4,179,835 | 3,685,878 | 4,320,177 | 3,961,162 | 3,483,623 | 5,313,198 |
| 2013 | 2,983,998 | 4,799,017 | 5,313,198 | 5,141,804 | 4,283,035 | 4,594,715 | 5,204,431 | 5,313,198 | 5,141,804 | 5,313,198 | 5,082,393 | 5,313,198 |
| 2014 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,307,632 | 5,141,804 | 4,457,826 | 4,265,688 | 5,141,804 | 3,881,736 | 2,876,397 | 5,217,224 |
| 2015 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 3,065,122 | 5,109,120 | 4,599,278 | 4,566,142 | 4,946,046 | 3,621,978 | 3,795,964 |
| 2016 | 5,313,198 | 4,439,371 | 5,313,198 | 5,141,804 | 5,313,198 | 4,256,513 | 5,313,198 | 4,686,647 | 5,141,804 | 4,096,186 | 2,761,102 | 2,526,081 |
| 2017 | 2,883,081 | 4,799,017 | 5,313,198 | 5,141,804 | 3,155,185 | 3,118,927 | 4,831,129 | 5,313,198 | 5,141,804 | 4,326,522 | 3,629,664 | 3,249,326 |
| 2018 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 3,671,454 | 2,542,447 | 3,242,607 | 4,924,925 | 5,141,804 | 5,313,198 | 4,621,209 | 5,313,198 |
| 2019 | 3,690,423 | 4,799,017 | 5,313,198 | 5,141,804 | 4,942,271 | 3,195,791 | 3,758,876 | 4,615,163 | 4,512,337 | 4,485,374 | 4,283,008 | 5,313,198 |
| 2020 | 5,153,732 | 4,799,017 | 5,313,198 | 5,141,804 | 3,933,560 | 4,056,667 | 4,664,334 | 3,924,156 | 5,141,804 | 3,834,080 | 4,997,843 | 5,313,198 |
| 2021 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 5,141,804 | 5,313,198 | 4,567,508 | 4,858,225 | 3,230,442 | 4,575,091 | 5,313,198 |
| 2022 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 5,141,804 | 5,313,198 | 5,313,198 | 5,141,804 | 5,313,198 | 5,141,804 | 5,313,198 |
| 2023 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 4,354,518 | 3,257,282 | 3,870,073 | 3,495,255 | 3,935,857 | 3,802,310 | 3,844,883 | 5,313,198 |
| 2024 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 2,781,882 | 1,919,849 | 2,932,845 | 3,773,247 | 5,065,758 | 4,159,727 | 2,153,876 | 0 |
| 2025 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 4,275,092 | 4,195,022 | 4,219,548 | 3,487,313 | 4,135,704 | 4,453,604 | 5,113,139 | 4,695,815 |
| 2026 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 4,540,910 | 4,751,702 | 4,361,000 | 5,141,804 | 5,271,693 | 3,598,919 | 4,031,439 |
| 2027 | 5,313,198 | 4,799,017 | 5,313,198 | 5,141,804 | 5,313,198 | 4,433,300 | 4,291,031 | 5,083,777 | 4,981,207 | 5,313,198 | 5,141,804 | 5,313,198 |
| 2028 | 4,733,241 | 4,799,017 | 5,313,198 | 5,141,804 | 4,076,527 | 3,318,773 | 4,076,581 | 4,202,148 | 5,111,876 | 4,811,021 | 4,436,736 | 2,484,032 |
| 2029 | 5,313,198 | 4,462,159 | 5,313,198 | 5,023,281 | 1,804,941 | 3,103,554 | 3,441,172 | 4,090,951 | 4,919,716 | 3,714,941 | 4,283,008 | 5,313,198 |

4. Ingresos anuales del proyecto

Tabla de ingresos del proyecto (s/.)

| AÑO | ENERGÍA (GWh) | INGRESOS (s/.) | TOTAL |
|------|---------------|----------------|---------------|
| 2015 | - | - | - |
| 2016 | - | - | - |
| 2017 | - | - | - |
| 2018 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2019 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2020 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2021 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2022 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2023 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2024 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2025 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2026 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2027 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2028 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2029 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2030 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2031 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2032 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2033 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2034 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2035 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2036 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2037 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2038 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2039 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2040 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2041 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2042 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2043 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2044 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2045 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2046 | 55.14 | 10,165,300.94 | 10,165,300.94 |
| 2047 | 55.14 | 10,165,300.94 | 10,165,300.94 |

5. Egresos anuales del proyecto

Tabla de egresos del proyecto (s/.)

| AÑO | INVERSIÓN | PERSONAL | REPUESTOS Y CONSUMIBLES | OTROS COSTOS INDIRECTOS | OSINERGMIN DGE COES | CANON DE AGUA | TOTAL EGRESOS |
|------|------------|----------|----------------------------|----------------------------|------------------------|------------------|------------------|
| 2015 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2016 | 14,499,756 | 0 | 0 | 0 | 0 | 0 | 14,499,756 |
| 2017 | 33,832,763 | 0 | 0 | 0 | 0 | 0 | 33,832,763 |
| 2018 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2019 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2020 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2021 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2022 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2023 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2024 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2025 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2026 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2027 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2028 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2029 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2030 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2031 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2032 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2033 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2034 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2035 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2036 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2037 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2038 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2039 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2040 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2041 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2042 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2043 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2044 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2045 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2046 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |
| 2047 | 0 | 42,902 | 39,120 | 681,323 | 101,653 | 101,653 | 966,650 |

Para los egresos anuales del proyecto, se contempló gastos personal fijo, repuesto y combustible, pago al COES, Osinergmin y DGE (1% del ingreso anual) y Canon de agua (1% del ingreso por energía anual) según lo indica la LCE (Ley de Concesiones Eléctricas). Los valores de personal fijo, repuestos y combustibles fueron obtenidos de proyectos similares de minicentrales hidroeléctricas realizados por empresas peruanas.

6. Flujo económico

Tabla de flujo económico (s/.)

| AÑO | TOTAL | TOTAL | FLUJO |
|------|------------|------------|-------------|
| | INGRESOS | EGRESOS | ECONÓMICO |
| 2017 | 0 | 14,499,756 | -14,499,756 |
| 2018 | 0 | 33,832,763 | -33,832,763 |
| 2019 | 10,165,301 | 966,650 | 9,198,651 |
| 2020 | 10,165,301 | 966,650 | 9,198,651 |
| 2021 | 10,165,301 | 966,650 | 9,198,651 |
| 2022 | 10,165,301 | 966,650 | 9,198,651 |
| 2023 | 10,165,301 | 966,650 | 9,198,651 |
| 2024 | 10,165,301 | 966,650 | 9,198,651 |
| 2025 | 10,165,301 | 966,650 | 9,198,651 |
| 2026 | 10,165,301 | 966,650 | 9,198,651 |
| 2027 | 10,165,301 | 966,650 | 9,198,651 |
| 2028 | 10,165,301 | 966,650 | 9,198,651 |
| 2029 | 10,165,301 | 966,650 | 9,198,651 |
| 2030 | 10,165,301 | 966,650 | 9,198,651 |
| 2031 | 10,165,301 | 966,650 | 9,198,651 |
| 2032 | 10,165,301 | 966,650 | 9,198,651 |
| 2033 | 10,165,301 | 966,650 | 9,198,651 |
| 2034 | 10,165,301 | 966,650 | 9,198,651 |
| 2035 | 10,165,301 | 966,650 | 9,198,651 |
| 2036 | 10,165,301 | 966,650 | 9,198,651 |
| 2037 | 10,165,301 | 966,650 | 9,198,651 |
| 2038 | 10,165,301 | 966,650 | 9,198,651 |
| 2039 | 10,165,301 | 966,650 | 9,198,651 |
| 2040 | 10,165,301 | 966,650 | 9,198,651 |
| 2041 | 10,165,301 | 966,650 | 9,198,651 |
| 2042 | 10,165,301 | 966,650 | 9,198,651 |
| 2043 | 10,165,301 | 966,650 | 9,198,651 |
| 2044 | 10,165,301 | 966,650 | 9,198,651 |
| 2045 | 10,165,301 | 966,650 | 9,198,651 |
| 2046 | 10,165,301 | 966,650 | 9,198,651 |
| 2047 | 10,165,301 | 966,650 | 9,198,651 |
| 2048 | 10,165,301 | 966,650 | 9,198,651 |

El flujo económico es igual al total de ingresos menos el total de egresos

7. Indicadores económicos

Tabla de indicadores económicos para diferentes tasas

| ANÁLISIS ECONÓMICO | | | | |
|--------------------|----------------|----------------|----------------|--------------|
| TASA | VANB (US\$) | VANC (US\$) | VANE (US\$) | B/C (ECO) |
| 9% | 87,900,669.20 | 50,137,638.80 | 37,763,030.40 | 1.75 |
| 10% | 79,196,216.92 | 48,673,574.45 | 30,522,642.47 | 1.63 |
| 11% | 71,727,146.98 | 47,343,032.29 | 24,384,114.69 | 1.52 |
| 12% | 65,276,920.55 | 46,124,869.57 | 19,152,050.98 | 1.42 |
| 13% | 59,672,310.23 | 45,002,085.95 | 14,670,224.28 | 1.33 |
| 14% | 54,773,921.26 | 43,960,920.89 | 10,813,000.37 | 1.25 |
| 15% | 50,468,929.27 | 42,990,161.91 | 7,478,767.36 | 1.17 |
| 16% | 46,665,488.77 | 42,080,611.81 | 4,584,876.96 | 1.11 |
| 17% | 43,288,406.57 | 41,224,676.18 | 2,063,730.39 | 1.05 |
| 18% | 40,275,777.58 | 40,416,042.56 | (140,264.97) | 1.00 |
| 19% | 37,576,355.96 | 39,649,429.52 | (2,073,073.56) | 0.95 |
| 20% | 35,147,490.86 | 38,920,389.56 | (3,772,898.69) | 0.90 |
| 21% | 32,953,497.65 | 38,225,153.33 | (5,271,655.68) | 0.86 |
| 22% | 30,964,366.47 | 37,560,506.15 | (6,596,139.68) | 0.82 |
| | TIR | 17.93% | | |

Evaluación financiera para el $Q=1.71m^3/s$

Tabla de flujo financiero (s/.)

| INTERÉS | AMORTIZACIÓN | SALDO | FLUJO FINANCIERO |
|------------------|------------------|-------------------|------------------|
| 0 | 0 | 0 | -14,499,756 |
| 0 | 0 | 0 | -19,333,008 |
| S/. 1,739,970.69 | S/. 60,082.02 | S/. 14,439,673.69 | S/. 7,398,597.85 |
| 1732760.843 | S/. 67,291.86 | S/. 14,372,381.83 | S/. 7,398,597.85 |
| 1724685.819 | S/. 75,366.89 | S/. 14,297,014.94 | S/. 7,398,597.85 |
| 1715641.793 | S/. 84,410.92 | S/. 14,212,604.02 | S/. 7,398,597.85 |
| 1705512.483 | S/. 94,540.23 | S/. 14,118,063.80 | S/. 7,398,597.85 |
| 1694167.656 | S/. 105,885.05 | S/. 14,012,178.75 | S/. 7,398,597.85 |
| 1681461.45 | S/. 118,591.26 | S/. 13,893,587.49 | S/. 7,398,597.85 |
| 1667230.499 | S/. 132,822.21 | S/. 13,760,765.28 | S/. 7,398,597.85 |
| 1651291.833 | S/. 148,760.87 | S/. 13,612,004.40 | S/. 7,398,597.85 |
| 1633440.528 | S/. 166,612.18 | S/. 13,445,392.22 | S/. 7,398,597.85 |
| 1613447.067 | S/. 186,605.64 | S/. 13,258,786.58 | S/. 7,398,597.85 |
| 1591054.39 | S/. 208,998.32 | S/. 13,049,788.26 | S/. 7,398,597.85 |
| 1565974.592 | S/. 234,078.12 | S/. 12,815,710.15 | S/. 7,398,597.85 |
| 1537885.218 | S/. 262,167.49 | S/. 12,553,542.66 | S/. 7,398,597.85 |
| 1506425.119 | S/. 293,627.59 | S/. 12,259,915.07 | S/. 7,398,597.85 |
| 1471189.808 | S/. 328,862.90 | S/. 11,931,052.17 | S/. 7,398,597.85 |
| 1431726.26 | S/. 368,326.45 | S/. 11,562,725.72 | S/. 7,398,597.85 |
| 1387527.087 | S/. 412,525.62 | S/. 11,150,200.10 | S/. 7,398,597.85 |
| 1338024.012 | S/. 462,028.70 | S/. 10,688,171.40 | S/. 7,398,597.85 |
| 1282580.568 | S/. 517,472.14 | S/. 10,170,699.26 | S/. 7,398,597.85 |
| 1220483.912 | S/. 579,568.80 | S/. 9,591,130.47 | S/. 7,398,597.85 |
| 1150935.656 | S/. 649,117.05 | S/. 8,942,013.42 | S/. 7,398,597.85 |
| 1073041.61 | S/. 727,011.10 | S/. 8,215,002.32 | S/. 7,398,597.85 |
| 985800.2781 | S/. 814,252.43 | S/. 7,400,749.89 | S/. 7,398,597.85 |
| 888089.9864 | S/. 911,962.72 | S/. 6,488,787.17 | S/. 7,398,597.85 |
| 778654.4598 | S/. 1,021,398.25 | S/. 5,467,388.92 | S/. 7,398,597.85 |
| 656086.67 | S/. 1,143,966.04 | S/. 4,323,422.88 | S/. 7,398,597.85 |
| 518810.7455 | S/. 1,281,241.96 | S/. 3,042,180.92 | S/. 7,398,597.85 |
| 365061.7099 | S/. 1,434,991.00 | S/. 1,607,189.92 | S/. 7,398,597.85 |
| 192862.7902 | S/. 1,607,189.92 | S/. -0.00 | S/. 7,398,597.85 |

Tabla de indicadores financieros para diferentes tasas

| ANÁLISIS FINANCIERO | | | |
|---------------------|------------------|---------------------------|-----------|
| VANF (US\$) | VANC(fin) (US\$) | VANC (fin+egresos) (US\$) | B/C (FIN) |
| 34,401,896.60 | 15,565,288.09 | 53,498,772.60 | 1.64 |
| 28,481,991.89 | 14,023,919.77 | 50,714,225.03 | 1.56 |
| 23,451,131.05 | 12,701,310.66 | 48,276,015.94 | 1.49 |
| 19,152,050.98 | 11,559,116.48 | 46,124,869.57 | 1.42 |
| 15,458,997.44 | 10,566,662.44 | 44,213,312.79 | 1.35 |
| 12,270,826.79 | 9,699,264.77 | 42,503,094.47 | 1.29 |
| 9,505,721.07 | 8,936,944.75 | 40,963,208.20 | 1.23 |
| 7,097,118.95 | 8,263,438.53 | 39,568,369.81 | 1.18 |
| 4,990,567.37 | 7,665,431.05 | 38,297,839.19 | 1.13 |
| 3,141,273.54 | 7,131,960.28 | 37,134,504.04 | 1.08 |
| 1,512,192.12 | 6,653,951.69 | 36,064,163.84 | 1.04 |
| 72,523.37 | 6,223,852.74 | 35,074,967.50 | 1.00 |
| (1,203,471.90) | 5,835,344.48 | 34,156,969.55 | 0.96 |
| (2,337,411.77) | 5,483,112.80 | 33,301,778.24 | 0.93 |
| | TIR | 20.05% | |

Evaluación económica para el Q=1.60m³/s

1. Descargas medias mensuales y anuales para el caudal de captación 1.60 m³/s captadas en la bocatoma

Tabla de descargas medias generadas mensuales y anuales en la bocatoma (m³/s)

| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1965 | 1.14 | 4.10 | 3.81 | 1.67 | 1.23 | 1.10 | 1.44 | 1.37 | 1.59 | 1.35 | 1.24 | 1.51 |
| 1966 | 4.01 | 3.19 | 3.71 | 2.43 | 0.99 | 1.53 | 1.41 | 1.48 | 1.70 | 1.81 | 1.63 | 1.76 |
| 1967 | 1.49 | 7.76 | 7.21 | 2.42 | 1.37 | 0.95 | 1.63 | 1.92 | 2.17 | 2.31 | 1.78 | 1.30 |
| 1968 | 1.55 | 1.19 | 2.46 | 1.80 | 0.75 | 0.89 | 1.02 | 1.21 | 1.38 | 1.05 | 1.17 | 0.93 |
| 1969 | 0.78 | 2.36 | 3.14 | 3.13 | 1.25 | 0.83 | 1.18 | 1.43 | 1.62 | 1.31 | 1.46 | 4.15 |
| 1970 | 6.02 | 3.09 | 3.20 | 2.97 | 2.00 | 1.36 | 1.53 | 1.54 | 2.10 | 1.99 | 1.40 | 2.72 |
| 1971 | 3.67 | 4.90 | 7.02 | 3.94 | 1.79 | 1.36 | 1.43 | 1.66 | 1.83 | 1.31 | 1.02 | 1.83 |
| 1972 | 4.83 | 4.12 | 8.48 | 5.07 | 1.90 | 1.60 | 1.64 | 1.50 | 1.68 | 1.47 | 1.02 | 2.41 |
| 1973 | 5.27 | 7.28 | 7.00 | 5.56 | 2.04 | 1.54 | 1.66 | 1.42 | 2.02 | 1.83 | 1.90 | 3.40 |
| 1974 | 3.95 | 4.49 | 5.59 | 2.69 | 0.98 | 1.52 | 1.57 | 1.67 | 1.79 | 1.69 | 1.15 | 1.27 |
| 1975 | 2.27 | 2.46 | 6.61 | 2.86 | 1.74 | 1.46 | 1.48 | 1.58 | 2.24 | 1.34 | 1.36 | 1.17 |
| 1976 | 2.74 | 4.80 | 4.44 | 2.56 | 1.10 | 1.32 | 1.45 | 1.56 | 1.72 | 1.21 | 0.91 | 1.77 |
| 1977 | 1.65 | 6.12 | 3.89 | 2.34 | 1.64 | 1.06 | 1.34 | 1.47 | 1.67 | 1.56 | 2.19 | 1.91 |
| 1978 | 2.11 | 4.77 | 2.88 | 1.82 | 1.16 | 1.09 | 1.18 | 1.39 | 1.49 | 1.56 | 1.08 | 1.65 |
| 1979 | 1.26 | 4.64 | 6.15 | 3.04 | 1.28 | 1.01 | 1.36 | 1.46 | 2.20 | 1.17 | 0.85 | 0.29 |
| 1980 | 2.27 | 2.00 | 3.73 | 2.57 | 1.08 | 1.15 | 1.20 | 1.11 | 1.88 | 1.32 | 1.96 | 2.01 |
| 1981 | 2.70 | 7.45 | 6.07 | 2.68 | 1.31 | 1.40 | 1.62 | 1.37 | 1.61 | 1.79 | 1.90 | 2.52 |
| 1982 | 2.29 | 7.79 | 3.39 | 1.80 | 1.48 | 1.02 | 1.37 | 2.09 | 1.59 | 1.68 | 2.09 | 1.56 |
| 1983 | 2.39 | 1.48 | 3.77 | 3.75 | 1.22 | 1.47 | 1.23 | 1.31 | 1.62 | 1.19 | 0.89 | 1.79 |
| 1984 | 2.52 | 8.75 | 6.87 | 4.19 | 2.02 | 1.62 | 1.44 | 1.50 | 1.86 | 1.91 | 1.60 | 3.45 |
| 1985 | 2.06 | 3.63 | 5.04 | 3.95 | 1.78 | 1.60 | 1.73 | 1.46 | 1.74 | 1.10 | 1.18 | 2.24 |
| 1986 | 4.60 | 5.11 | 6.85 | 5.15 | 2.35 | 1.83 | 1.68 | 1.53 | 1.78 | 1.40 | 1.20 | 1.71 |
| 1987 | 4.75 | 4.86 | 3.17 | 1.67 | 0.95 | 0.85 | 1.31 | 1.31 | 1.40 | 1.29 | 1.25 | 2.30 |
| 1988 | 3.87 | 5.54 | 3.43 | 4.01 | 1.73 | 1.45 | 1.39 | 1.24 | 1.43 | 1.27 | 0.77 | 0.87 |
| 1989 | 4.13 | 6.43 | 6.05 | 4.11 | 1.80 | 1.15 | 1.49 | 1.22 | 1.57 | 1.59 | 1.56 | 1.88 |
| 1990 | 2.64 | 1.58 | 1.88 | 1.29 | 0.49 | 1.42 | 1.04 | 1.22 | 1.56 | 1.40 | 2.86 | 2.34 |
| 1991 | 2.09 | 2.64 | 5.23 | 2.42 | 1.80 | 1.31 | 1.53 | 1.27 | 1.54 | 1.44 | 1.25 | 0.86 |
| 1992 | 1.56 | 0.91 | 2.48 | 1.77 | 0.87 | 0.74 | 1.08 | 1.22 | 1.26 | 1.39 | 0.81 | 0.57 |
| 1993 | 2.13 | 4.18 | 5.11 | 3.48 | 1.85 | 1.05 | 1.32 | 1.34 | 1.65 | 1.65 | 2.95 | 4.17 |
| 1994 | 4.88 | 5.44 | 5.37 | 5.33 | 2.63 | 2.00 | 1.66 | 1.55 | 1.90 | 1.32 | 1.58 | 1.70 |
| 1995 | 2.64 | 2.30 | 3.77 | 3.54 | 1.28 | 1.11 | 1.35 | 1.45 | 1.62 | 1.24 | 1.62 | 2.10 |
| 1996 | 3.72 | 5.75 | 5.17 | 3.71 | 1.60 | 1.23 | 1.33 | 1.57 | 1.67 | 1.27 | 1.32 | 1.10 |
| 1997 | 2.25 | 4.51 | 2.97 | 1.40 | 1.21 | 1.36 | 1.70 | 1.73 | 1.96 | 1.30 | 1.68 | 2.71 |
| 1998 | 4.95 | 5.20 | 4.88 | 2.78 | 1.31 | 1.07 | 1.41 | 1.36 | 1.58 | 1.37 | 1.24 | 0.88 |
| 1999 | 1.58 | 4.98 | 4.84 | 3.78 | 2.29 | 1.42 | 1.37 | 1.60 | 1.82 | 1.50 | 1.06 | 2.72 |
| 2000 | 4.43 | 6.03 | 5.55 | 2.80 | 2.29 | 1.50 | 1.79 | 1.55 | 1.82 | 2.12 | 1.59 | 2.68 |
| 2001 | 6.22 | 5.23 | 5.84 | 3.83 | 2.36 | 1.62 | 1.73 | 1.79 | 2.16 | 1.35 | 1.77 | 1.34 |
| 2002 | 1.29 | 3.39 | 5.31 | 3.38 | 1.44 | 1.04 | 1.46 | 1.63 | 1.80 | 1.37 | 1.93 | 2.44 |
| 2003 | 4.06 | 4.55 | 5.38 | 3.57 | 1.47 | 1.12 | 1.29 | 1.12 | 1.48 | 1.54 | 0.71 | 1.77 |
| 2004 | 0.86 | 3.58 | 3.23 | 2.71 | 1.10 | 0.81 | 1.51 | 1.15 | 1.31 | 1.25 | 2.13 | 3.12 |
| 2005 | 3.88 | 3.74 | 4.92 | 3.90 | 1.21 | 0.97 | 1.14 | 1.08 | 1.22 | 0.93 | 0.70 | 1.15 |
| 2006 | 2.83 | 4.19 | 5.68 | 4.63 | 1.53 | 1.22 | 1.41 | 1.54 | 1.56 | 1.31 | 1.39 | 2.37 |
| 2007 | 4.56 | 4.81 | 5.82 | 4.31 | 1.84 | 1.41 | 1.46 | 1.60 | 1.97 | 1.60 | 1.26 | 1.01 |
| 2008 | 4.33 | 5.60 | 4.58 | 2.74 | 1.16 | 0.88 | 1.32 | 1.37 | 1.26 | 0.91 | 0.92 | 1.16 |
| 2009 | 3.49 | 6.71 | 5.79 | 3.45 | 1.57 | 1.18 | 1.50 | 1.44 | 1.63 | 1.78 | 3.07 | 4.49 |
| 2010 | 7.15 | 4.29 | 4.65 | 4.01 | 1.71 | 1.91 | 1.84 | 1.58 | 1.60 | 1.20 | 1.54 | 2.75 |
| 2011 | 3.64 | 6.61 | 8.03 | 6.12 | 2.42 | 1.60 | 1.65 | 1.56 | 1.99 | 2.01 | 1.78 | 1.47 |
| 2012 | 3.37 | 6.49 | 5.47 | 4.49 | 1.73 | 1.06 | 1.35 | 1.19 | 1.44 | 1.27 | 1.16 | 2.51 |
| 2013 | 0.96 | 6.77 | 6.79 | 2.88 | 1.38 | 1.53 | 1.67 | 1.78 | 2.07 | 1.93 | 1.69 | 2.83 |
| 2014 | 3.51 | 3.79 | 5.41 | 3.18 | 1.71 | 1.75 | 1.43 | 1.37 | 1.76 | 1.25 | 0.96 | 1.68 |
| 2015 | 3.94 | 4.51 | 5.27 | 3.47 | 1.91 | 1.02 | 1.64 | 1.48 | 1.52 | 1.59 | 1.20 | 1.22 |
| 2016 | 2.38 | 1.58 | 3.76 | 2.66 | 1.73 | 1.42 | 1.87 | 1.51 | 1.87 | 1.32 | 0.92 | 0.81 |
| 2017 | 0.93 | 2.46 | 4.14 | 1.91 | 1.02 | 1.04 | 1.55 | 1.73 | 2.04 | 1.39 | 1.21 | 1.05 |
| 2018 | 3.13 | 4.54 | 3.12 | 2.52 | 1.18 | 0.85 | 1.04 | 1.59 | 2.09 | 1.86 | 1.54 | 3.61 |
| 2019 | 1.19 | 4.59 | 3.29 | 2.26 | 1.59 | 1.06 | 1.21 | 1.49 | 1.50 | 1.44 | 1.42 | 2.14 |
| 2020 | 1.66 | 4.93 | 3.01 | 2.91 | 1.27 | 1.35 | 1.50 | 1.26 | 1.80 | 1.23 | 1.66 | 3.13 |
| 2021 | 2.84 | 3.70 | 4.55 | 4.62 | 2.30 | 1.76 | 1.85 | 1.47 | 1.62 | 1.04 | 1.52 | 2.78 |
| 2022 | 2.37 | 4.13 | 2.91 | 3.57 | 2.01 | 2.08 | 1.86 | 2.02 | 2.50 | 2.23 | 3.39 | 4.22 |
| 2023 | 6.12 | 2.07 | 4.39 | 2.41 | 1.40 | 1.08 | 1.25 | 1.12 | 1.31 | 1.22 | 1.28 | 2.14 |
| 2024 | 2.99 | 4.99 | 5.78 | 2.39 | 0.90 | 0.64 | 0.94 | 1.21 | 1.68 | 1.34 | 0.72 | 0.24 |
| 2025 | 2.35 | 5.41 | 4.02 | 1.85 | 1.38 | 1.40 | 1.36 | 1.12 | 1.38 | 1.43 | 1.70 | 1.51 |
| 2026 | 4.17 | 5.80 | 5.50 | 3.06 | 1.88 | 1.51 | 1.53 | 1.40 | 1.82 | 1.70 | 1.20 | 1.30 |
| 2027 | 2.60 | 5.61 | 9.23 | 5.03 | 2.35 | 1.47 | 1.38 | 1.64 | 1.66 | 2.02 | 2.33 | 1.86 |
| 2028 | 1.52 | 2.90 | 3.91 | 2.23 | 1.31 | 1.10 | 1.31 | 1.35 | 1.70 | 1.55 | 1.48 | 0.80 |
| 2029 | 1.95 | 1.59 | 2.21 | 1.67 | 0.58 | 1.03 | 1.11 | 1.32 | 1.64 | 1.20 | 1.42 | 3.31 |

2. Volúmenes turbinados mensuales y anuales en la minicentral hidroeléctrica en m³

Tabla de volúmenes turbinados mensuales y anuales (m³)

| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1965 | 3,057,966 | 3,870,720 | 4,285,440 | 4,147,200 | 3,281,247 | 2,860,837 | 3,863,259 | 3,656,554 | 4,114,986 | 3,613,140 | 3,214,966 | 4,055,119 |
| 1966 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 2,651,354 | 3,960,720 | 3,787,946 | 3,950,960 | 4,147,200 | 4,285,440 | 4,147,200 | 4,285,440 |
| 1967 | 3,985,890 | 3,870,720 | 4,285,440 | 4,147,200 | 3,664,660 | 2,456,663 | 4,285,440 | 4,285,440 | 4,147,200 | 4,285,440 | 4,147,200 | 3,482,416 |
| 1968 | 4,159,875 | 2,877,373 | 4,285,440 | 4,147,200 | 2,007,768 | 2,297,644 | 2,719,867 | 3,252,601 | 3,578,296 | 2,805,234 | 3,022,818 | 2,481,998 |
| 1969 | 2,093,795 | 3,870,720 | 4,285,440 | 4,147,200 | 3,336,020 | 2,138,625 | 3,164,900 | 3,827,720 | 4,147,200 | 3,496,747 | 3,791,410 | 4,285,440 |
| 1970 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 3,523,417 | 4,102,892 | 4,135,820 | 4,147,200 | 4,285,440 | 3,632,391 | 4,285,440 |
| 1971 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 3,530,043 | 3,829,026 | 4,285,440 | 4,147,200 | 3,517,287 | 2,631,895 | 4,285,440 |
| 1972 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 4,146,242 | 4,285,440 | 4,005,733 | 4,147,200 | 3,928,086 | 2,638,521 | 4,285,440 |
| 1973 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 3,980,597 | 4,285,440 | 3,814,027 | 4,147,200 | 4,285,440 | 4,147,200 | 4,285,440 |
| 1974 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 2,623,968 | 3,927,591 | 4,198,746 | 4,285,440 | 4,147,200 | 4,285,440 | 2,983,063 | 3,409,922 |
| 1975 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 3,795,075 | 3,959,113 | 4,231,673 | 4,147,200 | 3,599,447 | 3,526,378 | 3,127,195 |
| 1976 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 2,938,914 | 3,430,656 | 3,876,953 | 4,176,900 | 4,147,200 | 3,236,574 | 2,353,612 | 4,285,440 |
| 1977 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 2,741,572 | 3,575,700 | 3,937,267 | 4,147,200 | 4,174,566 | 4,147,200 | 4,285,440 |
| 1978 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 3,096,387 | 2,834,334 | 3,151,207 | 3,731,867 | 3,869,831 | 4,167,719 | 2,804,166 | 4,285,440 |
| 1979 | 3,376,940 | 3,870,720 | 4,285,440 | 4,147,200 | 3,431,874 | 2,622,308 | 3,637,320 | 3,903,033 | 4,147,200 | 3,127,027 | 2,201,218 | 763,890 |
| 1980 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 2,904,681 | 2,973,475 | 3,226,520 | 2,965,041 | 4,147,200 | 3,524,133 | 4,147,200 | 4,285,440 |
| 1981 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 3,520,880 | 3,629,430 | 4,285,440 | 3,677,094 | 4,147,200 | 4,285,440 | 4,147,200 | 4,285,440 |
| 1982 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 3,952,220 | 2,655,437 | 3,678,400 | 4,285,440 | 4,108,360 | 4,285,440 | 4,147,200 | 4,171,110 |
| 1983 | 4,285,440 | 3,571,445 | 4,285,440 | 4,147,200 | 3,267,554 | 3,801,700 | 3,281,293 | 3,519,621 | 4,147,200 | 3,188,647 | 2,300,605 | 4,285,440 |
| 1984 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 4,147,200 | 3,856,413 | 4,012,580 | 4,147,200 | 4,285,440 | 4,142,578 | 4,285,440 |
| 1985 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 4,147,200 | 4,285,440 | 3,903,033 | 4,147,200 | 2,955,861 | 3,055,947 | 4,285,440 |
| 1986 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 4,147,200 | 4,285,440 | 4,094,740 | 4,147,200 | 3,756,920 | 3,122,205 | 4,285,440 |
| 1987 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 2,534,961 | 2,191,631 | 3,507,233 | 3,512,774 | 3,624,677 | 3,448,820 | 3,234,843 | 4,285,440 |
| 1988 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 3,761,946 | 3,733,173 | 3,327,914 | 3,697,561 | 3,407,740 | 1,995,819 | 2,329,761 |
| 1989 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 2,980,101 | 3,979,653 | 3,273,141 | 4,061,980 | 4,249,879 | 4,056,442 | 4,285,440 |
| 1990 | 4,285,440 | 3,826,811 | 4,285,440 | 3,347,974 | 1,323,102 | 3,675,810 | 2,774,640 | 3,273,141 | 4,035,476 | 3,750,073 | 4,147,200 | 4,285,440 |
| 1991 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 3,404,152 | 4,089,199 | 3,389,534 | 3,989,096 | 3,845,926 | 3,234,843 | 2,293,514 |
| 1992 | 4,188,873 | 2,196,397 | 4,285,440 | 4,147,200 | 2,343,255 | 1,919,973 | 2,897,880 | 3,279,987 | 3,273,510 | 3,715,840 | 2,108,457 | 1,532,326 |
| 1993 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 2,715,069 | 3,527,773 | 3,601,780 | 4,147,200 | 4,285,440 | 4,147,200 | 4,285,440 |
| 1994 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 4,147,200 | 4,285,440 | 4,156,360 | 4,147,200 | 3,544,673 | 4,089,571 | 4,285,440 |
| 1995 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 3,438,720 | 2,887,340 | 3,603,086 | 3,882,493 | 4,147,200 | 3,332,427 | 4,147,200 | 4,285,440 |
| 1996 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,280,859 | 3,185,501 | 3,562,006 | 4,204,286 | 4,147,200 | 3,414,587 | 3,413,740 | 2,953,210 |
| 1997 | 4,285,440 | 3,870,720 | 4,285,440 | 3,621,580 | 3,233,320 | 3,516,791 | 4,285,440 | 4,285,440 | 4,147,200 | 3,476,207 | 4,147,200 | 4,285,440 |
| 1998 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 3,514,034 | 2,781,327 | 3,774,253 | 3,642,860 | 4,088,483 | 3,661,067 | 3,221,592 | 2,366,008 |
| 1999 | 4,232,369 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 3,682,436 | 3,657,860 | 4,279,600 | 4,147,200 | 4,023,940 | 2,744,534 | 4,285,440 |
| 2000 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 3,881,210 | 4,285,440 | 4,156,360 | 4,147,200 | 4,285,440 | 4,116,074 | 4,285,440 |
| 2001 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 4,147,200 | 4,285,440 | 4,285,440 | 4,147,200 | 3,606,293 | 4,147,200 | 3,583,908 |
| 2002 | 3,456,683 | 3,870,720 | 4,285,440 | 4,147,200 | 3,870,060 | 2,695,192 | 3,897,493 | 4,285,440 | 4,147,200 | 3,674,760 | 4,147,200 | 4,285,440 |
| 2003 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 3,945,373 | 2,900,592 | 3,452,460 | 3,012,968 | 3,830,077 | 4,126,640 | 1,850,051 | 4,285,440 |
| 2004 | 2,304,028 | 3,870,720 | 4,285,440 | 4,147,200 | 2,945,761 | 2,092,244 | 4,048,119 | 3,067,741 | 3,386,148 | 3,359,814 | 4,147,200 | 4,285,440 |
| 2005 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 3,233,320 | 2,503,044 | 3,041,660 | 2,903,421 | 3,154,245 | 2,483,441 | 1,803,670 | 3,083,699 |
| 2006 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,109,693 | 3,172,249 | 3,767,406 | 4,122,127 | 4,042,102 | 3,517,287 | 3,605,888 | 4,285,440 |
| 2007 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 3,642,681 | 3,911,186 | 4,272,753 | 4,147,200 | 4,277,266 | 3,274,598 | 2,706,730 |
| 2008 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 3,116,927 | 2,271,141 | 3,541,466 | 3,656,554 | 3,253,632 | 2,442,361 | 2,373,489 | 3,105,447 |
| 2009 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,198,699 | 3,059,611 | 4,020,732 | 3,848,260 | 4,147,200 | 4,285,440 | 4,147,200 | 4,285,440 |
| 2010 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 4,147,200 | 4,285,440 | 4,224,826 | 4,147,200 | 3,216,034 | 3,996,810 | 4,285,440 |
| 2011 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 4,139,616 | 4,285,440 | 4,183,746 | 4,147,200 | 4,285,440 | 4,147,200 | 3,939,129 |
| 2012 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 2,748,198 | 3,603,086 | 3,177,288 | 3,724,064 | 3,414,587 | 3,002,940 | 4,285,440 |
| 2013 | 2,572,256 | 3,870,720 | 4,285,440 | 4,147,200 | 3,692,047 | 3,960,720 | 4,285,440 | 4,285,440 | 4,147,200 | 4,285,440 | 4,147,200 | 4,285,440 |
| 2014 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 4,147,200 | 3,842,719 | 3,677,094 | 4,147,200 | 3,346,120 | 2,479,502 | 4,285,440 |
| 2015 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 2,642,185 | 4,285,440 | 3,964,653 | 3,936,089 | 4,263,573 | 3,122,205 | 3,272,183 |
| 2016 | 4,285,440 | 3,826,811 | 4,285,440 | 4,147,200 | 4,285,440 | 3,669,184 | 4,285,440 | 4,039,967 | 4,147,200 | 3,530,980 | 2,380,115 | 2,177,523 |
| 2017 | 2,485,263 | 3,870,720 | 4,285,440 | 4,147,200 | 2,719,821 | 2,688,566 | 4,164,512 | 4,285,440 | 4,147,200 | 3,729,533 | 3,128,830 | 2,800,972 |
| 2018 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 3,164,854 | 2,191,631 | 3,295,180 | 4,245,366 | 4,147,200 | 4,285,440 | 3,983,558 | 4,285,440 |
| 2019 | 3,181,206 | 3,870,720 | 4,285,440 | 4,147,200 | 4,260,319 | 2,754,824 | 3,240,213 | 3,978,347 | 3,889,709 | 3,866,466 | 3,692,023 | 4,285,440 |
| 2020 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 3,390,794 | 3,496,914 | 4,020,732 | 3,382,687 | 4,147,200 | 3,305,040 | 4,147,200 | 4,285,440 |
| 2021 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 4,147,200 | 4,285,440 | 3,937,267 | 4,147,200 | 2,784,694 | 3,943,804 | 4,285,440 |
| 2022 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 4,147,200 | 4,285,440 | 4,285,440 | 4,147,200 | 4,285,440 | 4,147,200 | 4,285,440 |
| 2023 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 3,753,667 | 2,807,830 | 3,336,067 | 3,012,968 | 3,392,774 | 3,277,654 | 3,314,353 | 4,285,440 |
| 2024 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 2,398,028 | 1,654,941 | 2,528,161 | 3,252,601 | 4,147,200 | 3,585,753 | 1,856,677 | 655,149 |
| 2025 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 3,685,200 | 3,616,178 | 3,637,320 | 3,006,121 | 3,565,045 | 3,839,080 | 4,147,200 | 4,047,870 |
| 2026 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 3,914,339 | 4,096,046 | 3,759,254 | 4,147,200 | 4,285,440 | 3,102,327 | 3,475,167 |
| 2027 | 4,285,440 | 3,870,720 | 4,285,440 | 4,147,200 | 4,285,440 | 3,821,578 | 3,698,939 | 4,285,440 | 4,147,200 | 4,285,440 | 4,147,200 | 4,285,440 |
| 2028 | 4,080,132 | 3,870,720 | 4,285,440 | 4,147,200 | 3,514,034 | 2,860,837 | 3,514,080 | 3,622,320 | 4,147,200 | 4,147,180 | 3,824,539 | 2,141,276 |
| 2029 | 4,285,440 | 3,846,455 | 4,285,440 | 4,147,200 | 1,555,889 | 2,675,314 | 2,966,347 | 3,526,467 | 4,147,200 | 3,202,340 | 3,692,023 | 4,285,440 |

3. Energía mensual y anual generada en la minicentral en kWh

Tabla de energía generada en la minicentral (kWh)

| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1965 | 3,540,090 | 4,480,984 | 4,961,090 | 4,801,055 | 3,798,574 | 3,311,881 | 4,472,348 | 4,233,052 | 4,763,762 | 4,182,794 | 3,721,843 | 4,694,456 |
| 1966 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 3,069,372 | 4,585,174 | 4,385,160 | 4,573,875 | 4,801,055 | 4,961,090 | 4,801,055 | 4,961,090 |
| 1967 | 4,614,312 | 4,480,984 | 4,961,090 | 4,801,055 | 4,242,437 | 2,843,985 | 4,961,090 | 4,961,090 | 4,801,055 | 4,961,090 | 4,801,055 | 4,031,460 |
| 1968 | 4,815,728 | 3,331,025 | 4,961,090 | 4,801,055 | 2,324,317 | 2,659,894 | 3,148,686 | 3,765,412 | 4,142,457 | 3,247,512 | 3,499,400 | 2,873,315 |
| 1969 | 2,423,906 | 4,480,984 | 4,961,090 | 4,801,055 | 3,861,983 | 2,475,804 | 3,663,884 | 4,431,205 | 4,801,055 | 4,048,050 | 4,389,171 | 4,961,090 |
| 1970 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 4,078,925 | 4,749,762 | 4,787,880 | 4,801,055 | 4,961,090 | 4,205,080 | 4,961,090 |
| 1971 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 4,086,595 | 4,432,717 | 4,961,090 | 4,801,055 | 4,071,828 | 3,046,845 | 4,961,090 |
| 1972 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 4,799,946 | 4,961,090 | 4,637,284 | 4,801,055 | 4,547,395 | 3,054,515 | 4,961,090 |
| 1973 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 4,608,185 | 4,961,090 | 4,415,353 | 4,801,055 | 4,961,090 | 4,801,055 | 4,961,090 |
| 1974 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 3,037,667 | 4,546,821 | 4,860,727 | 4,961,090 | 4,801,055 | 4,961,090 | 3,453,378 | 3,947,536 |
| 1975 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 4,393,413 | 4,583,313 | 4,898,846 | 4,801,055 | 4,166,942 | 4,082,353 | 3,620,234 |
| 1976 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 3,402,268 | 3,971,539 | 4,488,200 | 4,835,437 | 4,801,055 | 3,746,858 | 2,724,686 | 4,961,090 |
| 1977 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 3,173,814 | 4,139,451 | 4,558,023 | 4,801,055 | 4,832,736 | 4,801,055 | 4,961,090 |
| 1978 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 3,584,569 | 3,281,200 | 3,648,031 | 4,320,240 | 4,479,956 | 4,824,809 | 3,246,275 | 4,961,090 |
| 1979 | 3,909,354 | 4,480,984 | 4,961,090 | 4,801,055 | 3,972,949 | 3,035,746 | 4,210,786 | 4,518,393 | 4,801,055 | 3,620,040 | 2,548,266 | 884,326 |
| 1980 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 3,362,638 | 3,442,279 | 3,735,219 | 3,432,515 | 4,801,055 | 4,079,755 | 4,801,055 | 4,961,090 |
| 1981 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,075,988 | 4,201,652 | 4,961,090 | 4,256,831 | 4,801,055 | 4,961,090 | 4,801,055 | 4,961,090 |
| 1982 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,575,334 | 3,074,098 | 4,258,342 | 4,961,090 | 4,756,092 | 4,961,090 | 4,801,055 | 4,828,734 |
| 1983 | 4,961,090 | 4,134,525 | 4,961,090 | 4,801,055 | 3,782,722 | 4,401,083 | 3,798,628 | 4,074,530 | 4,801,055 | 3,691,375 | 2,663,323 | 4,961,090 |
| 1984 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 4,801,055 | 4,464,421 | 4,645,210 | 4,801,055 | 4,961,090 | 4,795,704 | 4,961,090 |
| 1985 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 4,801,055 | 4,961,090 | 4,518,393 | 4,801,055 | 3,421,887 | 3,537,752 | 4,961,090 |
| 1986 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 4,801,055 | 4,961,090 | 4,740,324 | 4,801,055 | 4,349,242 | 3,614,457 | 4,961,090 |
| 1987 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 2,934,628 | 2,537,168 | 4,060,190 | 4,066,604 | 4,196,150 | 3,992,567 | 3,744,854 | 4,961,090 |
| 1988 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 4,355,061 | 4,321,751 | 3,852,599 | 4,280,525 | 3,945,011 | 2,310,483 | 2,697,075 |
| 1989 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 3,449,949 | 4,607,092 | 3,789,190 | 4,702,398 | 4,919,923 | 4,695,988 | 4,961,090 |
| 1990 | 4,961,090 | 4,430,153 | 4,961,090 | 3,875,821 | 1,531,705 | 4,255,345 | 3,212,095 | 3,789,190 | 4,671,717 | 4,341,316 | 4,801,055 | 4,961,090 |
| 1991 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 3,940,857 | 4,733,909 | 3,923,934 | 4,618,024 | 4,452,282 | 3,744,854 | 2,655,113 |
| 1992 | 4,849,298 | 2,542,684 | 4,961,090 | 4,801,055 | 2,712,696 | 2,222,680 | 3,354,765 | 3,797,116 | 3,789,617 | 4,301,686 | 2,440,880 | 1,773,916 |
| 1993 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 3,143,132 | 4,083,968 | 4,169,643 | 4,801,055 | 4,961,090 | 4,801,055 | 4,961,090 |
| 1994 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 4,801,055 | 4,961,090 | 4,811,659 | 4,801,055 | 4,103,533 | 4,734,340 | 4,961,090 |
| 1995 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 3,980,875 | 3,342,563 | 4,171,155 | 4,494,614 | 4,801,055 | 3,857,823 | 4,801,055 | 4,961,090 |
| 1996 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,955,787 | 3,687,733 | 4,123,598 | 4,867,142 | 4,801,055 | 3,952,937 | 3,951,956 | 3,418,818 |
| 1997 | 4,961,090 | 4,480,984 | 4,961,090 | 4,192,565 | 3,743,091 | 4,071,254 | 4,961,090 | 4,961,090 | 4,801,055 | 4,024,272 | 4,801,055 | 4,961,090 |
| 1998 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,068,062 | 3,219,836 | 4,369,308 | 4,217,200 | 4,733,080 | 4,238,277 | 3,729,513 | 2,739,037 |
| 1999 | 4,899,652 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 4,263,015 | 4,234,564 | 4,954,329 | 4,801,055 | 4,658,361 | 3,177,242 | 4,961,090 |
| 2000 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 4,493,128 | 4,961,090 | 4,811,659 | 4,801,055 | 4,961,090 | 4,765,022 | 4,961,090 |
| 2001 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 4,801,055 | 4,961,090 | 4,961,090 | 4,801,055 | 4,174,868 | 4,801,055 | 4,148,953 |
| 2002 | 4,001,670 | 4,480,984 | 4,961,090 | 4,801,055 | 4,480,220 | 3,120,121 | 4,511,978 | 4,961,090 | 4,801,055 | 4,254,129 | 4,801,055 | 4,961,090 |
| 2003 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,567,407 | 3,357,904 | 3,996,781 | 3,487,997 | 4,433,933 | 4,777,253 | 2,141,733 | 4,961,090 |
| 2004 | 2,667,285 | 4,480,984 | 4,961,090 | 4,801,055 | 3,410,195 | 2,422,111 | 4,686,353 | 3,551,406 | 3,920,014 | 3,889,528 | 4,801,055 | 4,961,090 |
| 2005 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 3,743,091 | 2,897,678 | 3,521,214 | 3,361,180 | 3,651,549 | 2,874,985 | 2,088,040 | 3,569,880 |
| 2006 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,757,634 | 3,672,392 | 4,361,382 | 4,772,028 | 4,679,387 | 4,071,828 | 4,174,399 | 4,961,090 |
| 2007 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 4,216,993 | 4,527,830 | 4,946,403 | 4,801,055 | 4,951,627 | 3,790,877 | 3,133,478 |
| 2008 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 3,608,347 | 2,629,213 | 4,099,820 | 4,233,052 | 3,766,605 | 2,827,628 | 2,747,698 | 3,595,057 |
| 2009 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,860,674 | 3,541,994 | 4,654,648 | 4,454,984 | 4,801,055 | 4,961,090 | 4,801,055 | 4,961,090 |
| 2010 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 4,801,055 | 4,961,090 | 4,890,920 | 4,801,055 | 3,723,079 | 4,626,954 | 4,961,090 |
| 2011 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 4,792,275 | 4,961,090 | 4,843,363 | 4,801,055 | 4,961,090 | 4,801,055 | 4,560,179 |
| 2012 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 3,181,484 | 4,171,155 | 3,678,224 | 4,311,206 | 3,952,937 | 3,476,389 | 4,961,090 |
| 2013 | 2,977,802 | 4,480,984 | 4,961,090 | 4,801,055 | 4,274,141 | 4,585,174 | 4,961,090 | 4,961,090 | 4,801,055 | 4,961,090 | 4,801,055 | 4,961,090 |
| 2014 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,480,220 | 4,801,055 | 4,448,569 | 4,256,831 | 4,801,055 | 3,873,676 | 2,870,425 | 4,961,090 |
| 2015 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 3,058,757 | 4,961,090 | 4,589,728 | 4,556,660 | 4,935,775 | 3,614,457 | 3,788,082 |
| 2016 | 4,961,090 | 4,430,153 | 4,961,090 | 4,801,055 | 4,961,090 | 4,247,674 | 4,961,090 | 4,676,915 | 4,801,055 | 4,087,681 | 2,755,368 | 2,520,836 |
| 2017 | 2,877,094 | 4,480,984 | 4,961,090 | 4,801,055 | 3,148,633 | 3,112,450 | 4,821,097 | 4,961,090 | 4,801,055 | 4,317,538 | 3,622,127 | 3,242,578 |
| 2018 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 3,663,830 | 2,537,168 | 3,235,873 | 4,914,698 | 4,801,055 | 4,961,090 | 4,611,613 | 4,961,090 |
| 2019 | 3,682,760 | 4,480,984 | 4,961,090 | 4,801,055 | 4,932,009 | 3,189,154 | 3,751,071 | 4,605,580 | 4,502,967 | 4,476,060 | 4,274,114 | 4,961,090 |
| 2020 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 3,925,392 | 4,048,243 | 4,654,648 | 3,916,008 | 4,801,055 | 3,826,119 | 4,801,055 | 4,961,090 |
| 2021 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 4,801,055 | 4,961,090 | 4,558,023 | 4,801,055 | 3,223,734 | 4,565,591 | 4,961,090 |
| 2022 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 4,801,055 | 4,961,090 | 4,961,090 | 4,801,055 | 4,961,090 | 4,801,055 | 4,961,090 |
| 2023 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,345,476 | 3,250,518 | 3,862,037 | 3,487,997 | 3,927,685 | 3,794,414 | 3,836,899 | 4,961,090 |
| 2024 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 2,776,105 | 1,915,862 | 2,926,755 | 3,765,412 | 4,801,055 | 4,151,090 | 2,149,404 | 758,440 |
| 2025 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,266,215 | 4,186,311 | 4,210,786 | 3,480,071 | 4,127,116 | 4,444,356 | 4,801,055 | 4,686,064 |
| 2026 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 4,531,481 | 4,741,835 | 4,351,944 | 4,801,055 | 4,961,090 | 3,591,445 | 4,023,068 |
| 2027 | 4,961,090 | 4,480,984 | 4,961,090 | 4,801,055 | 4,961,090 | 4,424,094 | 4,282,121 | 4,961,090 | 4,801,055 | 4,961,090 | 4,801,055 | 4,961,090 |
| 2028 | 4,723,413 | 4,480,984 | 4,961,090 | 4,801,055 | 4,068,062 | 3,311,881 | 4,068,116 | 4,193,422 | 4,801,055 | 4,801,031 | 4,427,523 | 2,478,874 |
| 2029 | 4,961,090 | 4,452,893 | 4,961,090 | 4,801,055 | 1,801,193 | 3,097,109 | 3,434,026 | 4,082,456 | 4,801,055 | 3,707,227 | 4,274,114 | 4,961,090 |

4. Ingresos anuales del proyecto

Tabla de ingresos del proyecto (s/.)

| AÑO | ENERGÍA (GWh) | INGRESOS (s/.) | TOTAL |
|------|---------------|----------------|--------------|
| 2015 | - | - | - |
| 2016 | - | - | - |
| 2017 | - | - | - |
| 2018 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2019 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2020 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2021 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2022 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2023 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2024 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2025 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2026 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2027 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2028 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2029 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2030 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2031 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2032 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2033 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2034 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2035 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2036 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2037 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2038 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2039 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2040 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2041 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2042 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2043 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2044 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2045 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2046 | 52.98 | 9,767,743.66 | 9,767,743.66 |
| 2047 | 52.98 | 9,767,743.66 | 9,767,743.66 |

5. Egresos anuales del proyecto

Tabla de egresos del proyecto (s/.)

| AÑO | INVERSIÓN | PERSONAL | REPUESTOS Y CONSUMIBLES | OTROS COSTOS INDIRECTOS | OSINERGMIN DGE COES | CANON DE AGUA | TOTAL EGRESOS |
|------|------------|----------|----------------------------|----------------------------|------------------------|------------------|------------------|
| 2015 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2016 | 13,798,753 | 0 | 0 | 0 | 0 | 0 | 13,798,753 |
| 2017 | 32,197,091 | 0 | 0 | 0 | 0 | 0 | 32,197,091 |
| 2018 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2019 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2020 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2021 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2022 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2023 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2024 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2025 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2026 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2027 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2028 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2029 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2030 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2031 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2032 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2033 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2034 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2035 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2036 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2037 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2038 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2039 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2040 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2041 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2042 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2043 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2044 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2045 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2046 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |
| 2047 | 0 | 42,902 | 39,120 | 642,540 | 97,677 | 97,677 | 919,917 |

Para los egresos anuales del proyecto, se contempló gastos personal fijo, repuesto y combustible, pago al COES, Osinergmin y DGE (1% del ingreso anual) y Canon de agua (1% del ingreso por energía anual) según lo indica la LCE (Ley de Concesiones Eléctricas). Los valores de personal fijo, repuestos y combustibles fueron obtenidos de proyectos similares de minicentrales hidroeléctricas realizados por empresas peruanas.

6. Flujo económico

Tabla de flujo económico

| AÑO | TOTAL | TOTAL | FLUJO |
|------|-----------|------------|-------------|
| | INGRESOS | EGRESOS | ECONÓMICO |
| 2017 | 0 | 13,798,753 | -13,798,753 |
| 2018 | 0 | 32,197,091 | -32,197,091 |
| 2019 | 9,767,744 | 919,917 | 8,847,827 |
| 2020 | 9,767,744 | 919,917 | 8,847,827 |
| 2021 | 9,767,744 | 919,917 | 8,847,827 |
| 2022 | 9,767,744 | 919,917 | 8,847,827 |
| 2023 | 9,767,744 | 919,917 | 8,847,827 |
| 2024 | 9,767,744 | 919,917 | 8,847,827 |
| 2025 | 9,767,744 | 919,917 | 8,847,827 |
| 2026 | 9,767,744 | 919,917 | 8,847,827 |
| 2027 | 9,767,744 | 919,917 | 8,847,827 |
| 2028 | 9,767,744 | 919,917 | 8,847,827 |
| 2029 | 9,767,744 | 919,917 | 8,847,827 |
| 2030 | 9,767,744 | 919,917 | 8,847,827 |
| 2031 | 9,767,744 | 919,917 | 8,847,827 |
| 2032 | 9,767,744 | 919,917 | 8,847,827 |
| 2033 | 9,767,744 | 919,917 | 8,847,827 |
| 2034 | 9,767,744 | 919,917 | 8,847,827 |
| 2035 | 9,767,744 | 919,917 | 8,847,827 |
| 2036 | 9,767,744 | 919,917 | 8,847,827 |
| 2037 | 9,767,744 | 919,917 | 8,847,827 |
| 2038 | 9,767,744 | 919,917 | 8,847,827 |
| 2039 | 9,767,744 | 919,917 | 8,847,827 |
| 2040 | 9,767,744 | 919,917 | 8,847,827 |
| 2041 | 9,767,744 | 919,917 | 8,847,827 |
| 2042 | 9,767,744 | 919,917 | 8,847,827 |
| 2043 | 9,767,744 | 919,917 | 8,847,827 |
| 2044 | 9,767,744 | 919,917 | 8,847,827 |
| 2045 | 9,767,744 | 919,917 | 8,847,827 |
| 2046 | 9,767,744 | 919,917 | 8,847,827 |
| 2047 | 9,767,744 | 919,917 | 8,847,827 |
| 2048 | 9,767,744 | 919,917 | 8,847,827 |

El flujo económico es igual al total de ingresos menos el total de egresos

7. Indicadores económicos

Tabla de indicadores económicos para diferentes tasas

| ANÁLISIS ECONÓMICO | | | | |
|--------------------|----------------|----------------|----------------|--------------|
| TASA | VANB (US\$) | VANC (US\$) | VANE (US\$) | B/C (ECO) |
| 9% | 84,462,940.08 | 47,713,693.83 | 36,749,246.25 | 1.77 |
| 10% | 76,098,912.39 | 46,320,410.86 | 29,778,501.53 | 1.64 |
| 11% | 68,921,952.17 | 45,054,194.84 | 23,867,757.32 | 1.53 |
| 12% | 62,723,989.24 | 43,894,925.19 | 18,829,064.05 | 1.43 |
| 13% | 57,338,571.02 | 42,826,423.46 | 14,512,147.56 | 1.34 |
| 14% | 52,631,754.36 | 41,835,594.37 | 10,796,159.99 | 1.26 |
| 15% | 48,495,127.37 | 40,911,767.53 | 7,583,359.84 | 1.19 |
| 16% | 44,840,436.57 | 40,046,190.37 | 4,794,246.20 | 1.12 |
| 17% | 41,595,429.52 | 39,231,635.64 | 2,363,793.88 | 1.06 |
| 18% | 38,700,622.19 | 38,462,096.07 | 238,526.12 | 1.01 |
| 19% | 36,106,772.92 | 37,732,545.57 | (1,625,772.65) | 0.96 |
| 20% | 33,772,898.91 | 37,038,751.63 | (3,265,852.73) | 0.91 |
| 21% | 31,664,711.12 | 36,377,127.17 | (4,712,416.04) | 0.87 |
| 22% | 29,753,373.37 | 35,744,612.90 | (5,991,239.53) | 0.83 |
| | | | | |
| | TIR | 18.12% | | |
| | | | | |

Evaluación financiera para el $Q=1.60m^3/s$

Tabla de flujo financiero (s/.)

| INTERÉS | AMORTIZACIÓN | SALDO | FLUJO FINANCIERO |
|-----------|--------------|------------|------------------|
| 0 | 0 | 0 | -13,798,753 |
| 0 | 0 | 0 | -16,734,250 |
| 1,855,541 | 64,073 | 15,398,768 | 6,928,213 |
| 1,847,852 | 71,761 | 15,327,007 | 6,928,213 |
| 1,839,241 | 80,373 | 15,246,634 | 6,928,213 |
| 1,829,596 | 90,018 | 15,156,616 | 6,928,213 |
| 1,818,794 | 100,820 | 15,055,797 | 6,928,213 |
| 1,806,696 | 112,918 | 14,942,879 | 6,928,213 |
| 1,793,145 | 126,468 | 14,816,410 | 6,928,213 |
| 1,777,969 | 141,644 | 14,674,766 | 6,928,213 |
| 1,760,972 | 158,642 | 14,516,124 | 6,928,213 |
| 1,741,935 | 177,679 | 14,338,446 | 6,928,213 |
| 1,720,613 | 199,000 | 14,139,446 | 6,928,213 |
| 1,696,733 | 222,880 | 13,916,565 | 6,928,213 |
| 1,669,988 | 249,626 | 13,666,940 | 6,928,213 |
| 1,640,033 | 279,581 | 13,387,359 | 6,928,213 |
| 1,606,483 | 313,131 | 13,074,228 | 6,928,213 |
| 1,568,907 | 350,706 | 12,723,522 | 6,928,213 |
| 1,526,823 | 392,791 | 12,330,731 | 6,928,213 |
| 1,479,688 | 439,926 | 11,890,805 | 6,928,213 |
| 1,426,897 | 492,717 | 11,398,088 | 6,928,213 |
| 1,367,771 | 551,843 | 10,846,245 | 6,928,213 |
| 1,301,549 | 618,064 | 10,228,181 | 6,928,213 |
| 1,227,382 | 692,232 | 9,535,949 | 6,928,213 |
| 1,144,314 | 775,300 | 8,760,649 | 6,928,213 |
| 1,051,278 | 868,336 | 7,892,313 | 6,928,213 |
| 947,078 | 972,536 | 6,919,777 | 6,928,213 |
| 830,373 | 1,089,240 | 5,830,537 | 6,928,213 |
| 699,664 | 1,219,949 | 4,610,588 | 6,928,213 |
| 553,271 | 1,366,343 | 3,244,245 | 6,928,213 |
| 389,309 | 1,530,304 | 1,713,941 | 6,928,213 |
| 205,673 | 1,713,941 | -0 | 6,928,213 |

Tabla de indicadores financieros para diferentes tasas

| ANÁLISIS FINANCIERO | | | |
|---------------------|---------------------|------------------------------|--------------|
| VANF (US\$) | VANC(fin) (US\$) | VANC (fin+egresos) (US\$) | B/C (FIN) |
| 33,164,863.32 | 16,599,146.69 | 51,298,076.76 | 1.65 |
| 27,602,309.34 | 14,955,399.47 | 48,496,603.05 | 1.57 |
| 22,872,804.17 | 13,544,941.64 | 46,049,147.99 | 1.50 |
| 18,829,064.05 | 12,326,882.03 | 43,894,925.19 | 1.43 |
| 15,353,311.64 | 11,268,508.42 | 41,985,259.38 | 1.37 |
| 12,350,816.38 | 10,343,497.52 | 40,280,937.98 | 1.31 |
| 9,744,945.41 | 9,530,543.60 | 38,750,181.96 | 1.25 |
| 7,473,353.27 | 8,812,302.57 | 37,367,083.29 | 1.20 |
| 5,485,033.66 | 8,174,574.97 | 36,110,395.86 | 1.15 |
| 3,738,026.98 | 7,605,670.65 | 34,962,595.21 | 1.11 |
| 2,197,629.18 | 7,095,912.36 | 33,909,143.74 | 1.06 |
| 834,985.27 | 6,637,245.90 | 32,937,913.63 | 1.03 |
| (374,020.32) | 6,222,932.62 | 32,038,731.45 | 0.99 |
| (1,449,643.59) | 5,847,305.44 | 31,203,016.96 | 0.95 |
| | TIR | 20.68% | |

Evaluación económica para el $Q=1.55m^3/s$

1. Descargas medias mensuales y anuales para el caudal de captación $1.55 m^3/s$ captadas en la bocatoma

| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1965 | 1.14 | 4.10 | 3.81 | 1.67 | 1.23 | 1.10 | 1.44 | 1.37 | 1.59 | 1.35 | 1.24 | 1.51 |
| 1966 | 4.01 | 3.19 | 3.71 | 2.43 | 0.99 | 1.53 | 1.41 | 1.48 | 1.70 | 1.81 | 1.63 | 1.76 |
| 1967 | 1.49 | 7.76 | 7.21 | 2.42 | 1.37 | 0.95 | 1.63 | 1.92 | 2.17 | 2.31 | 1.78 | 1.30 |
| 1968 | 1.55 | 1.19 | 2.46 | 1.80 | 0.75 | 0.89 | 1.02 | 1.21 | 1.38 | 1.05 | 1.17 | 0.93 |
| 1969 | 0.78 | 2.36 | 3.14 | 3.13 | 1.25 | 0.83 | 1.18 | 1.43 | 1.62 | 1.31 | 1.46 | 4.15 |
| 1970 | 6.02 | 3.09 | 3.20 | 2.97 | 2.00 | 1.36 | 1.53 | 1.54 | 2.10 | 1.99 | 1.40 | 2.72 |
| 1971 | 3.67 | 4.90 | 7.02 | 3.94 | 1.79 | 1.36 | 1.43 | 1.66 | 1.83 | 1.31 | 1.02 | 1.83 |
| 1972 | 4.83 | 4.12 | 8.48 | 5.07 | 1.90 | 1.60 | 1.64 | 1.50 | 1.68 | 1.47 | 1.02 | 2.41 |
| 1973 | 5.27 | 7.28 | 7.00 | 5.56 | 2.04 | 1.54 | 1.66 | 1.42 | 2.02 | 1.83 | 1.90 | 3.40 |
| 1974 | 3.95 | 4.49 | 5.59 | 2.69 | 0.98 | 1.52 | 1.57 | 1.67 | 1.79 | 1.69 | 1.15 | 1.27 |
| 1975 | 2.27 | 2.46 | 6.61 | 2.86 | 1.74 | 1.46 | 1.48 | 1.58 | 2.24 | 1.34 | 1.36 | 1.17 |
| 1976 | 2.74 | 4.80 | 4.44 | 2.56 | 1.10 | 1.32 | 1.45 | 1.56 | 1.72 | 1.21 | 0.91 | 1.77 |
| 1977 | 1.65 | 6.12 | 3.89 | 2.34 | 1.64 | 1.06 | 1.34 | 1.47 | 1.67 | 1.56 | 2.19 | 1.91 |
| 1978 | 2.11 | 4.77 | 2.88 | 1.82 | 1.16 | 1.09 | 1.18 | 1.39 | 1.49 | 1.56 | 1.08 | 1.65 |
| 1979 | 1.26 | 4.64 | 6.15 | 3.04 | 1.28 | 1.01 | 1.36 | 1.46 | 2.20 | 1.17 | 0.85 | 0.29 |
| 1980 | 2.27 | 2.00 | 3.73 | 2.57 | 1.08 | 1.15 | 1.20 | 1.11 | 1.88 | 1.32 | 1.96 | 2.01 |
| 1981 | 2.70 | 7.45 | 6.07 | 2.68 | 1.31 | 1.40 | 1.62 | 1.37 | 1.61 | 1.79 | 1.90 | 2.52 |
| 1982 | 2.29 | 7.79 | 3.39 | 1.80 | 1.48 | 1.02 | 1.37 | 2.09 | 1.59 | 1.68 | 2.09 | 1.56 |
| 1983 | 2.39 | 1.48 | 3.77 | 3.75 | 1.22 | 1.47 | 1.23 | 1.31 | 1.62 | 1.19 | 0.89 | 1.79 |
| 1984 | 2.52 | 8.75 | 6.87 | 4.19 | 2.02 | 1.62 | 1.44 | 1.50 | 1.86 | 1.91 | 1.60 | 3.45 |
| 1985 | 2.06 | 3.63 | 5.04 | 3.95 | 1.78 | 1.60 | 1.73 | 1.46 | 1.74 | 1.10 | 1.18 | 2.24 |
| 1986 | 4.60 | 5.11 | 6.85 | 5.15 | 2.35 | 1.83 | 1.68 | 1.53 | 1.78 | 1.40 | 1.20 | 1.71 |
| 1987 | 4.75 | 4.86 | 3.17 | 1.67 | 0.95 | 0.85 | 1.31 | 1.31 | 1.40 | 1.29 | 1.25 | 2.30 |
| 1988 | 3.87 | 5.54 | 3.43 | 4.01 | 1.73 | 1.45 | 1.39 | 1.24 | 1.43 | 1.27 | 0.77 | 0.87 |
| 1989 | 4.13 | 6.43 | 6.05 | 4.11 | 1.80 | 1.15 | 1.49 | 1.22 | 1.57 | 1.59 | 1.56 | 1.88 |
| 1990 | 2.64 | 1.58 | 1.88 | 1.29 | 0.49 | 1.42 | 1.04 | 1.22 | 1.56 | 1.40 | 2.86 | 2.34 |
| 1991 | 2.09 | 2.64 | 5.23 | 2.42 | 1.80 | 1.31 | 1.53 | 1.27 | 1.54 | 1.44 | 1.25 | 0.86 |
| 1992 | 1.56 | 0.91 | 2.48 | 1.77 | 0.87 | 0.74 | 1.08 | 1.22 | 1.26 | 1.39 | 0.81 | 0.57 |
| 1993 | 2.13 | 4.18 | 5.11 | 3.48 | 1.85 | 1.05 | 1.32 | 1.34 | 1.65 | 1.65 | 2.95 | 4.17 |
| 1994 | 4.88 | 5.44 | 5.37 | 5.33 | 2.63 | 2.00 | 1.66 | 1.55 | 1.90 | 1.32 | 1.58 | 1.70 |
| 1995 | 2.64 | 2.30 | 3.77 | 3.54 | 1.28 | 1.11 | 1.35 | 1.45 | 1.62 | 1.24 | 1.62 | 2.10 |
| 1996 | 3.72 | 5.75 | 5.17 | 3.71 | 1.60 | 1.23 | 1.33 | 1.57 | 1.67 | 1.27 | 1.32 | 1.10 |
| 1997 | 2.25 | 4.51 | 2.97 | 1.40 | 1.21 | 1.36 | 1.70 | 1.73 | 1.96 | 1.30 | 1.68 | 2.71 |
| 1998 | 4.95 | 5.20 | 4.88 | 2.78 | 1.31 | 1.07 | 1.41 | 1.36 | 1.58 | 1.37 | 1.24 | 0.88 |
| 1999 | 1.58 | 4.98 | 4.84 | 3.78 | 2.29 | 1.42 | 1.37 | 1.60 | 1.82 | 1.50 | 1.06 | 2.72 |
| 2000 | 4.43 | 6.03 | 5.55 | 2.80 | 2.29 | 1.50 | 1.79 | 1.55 | 1.82 | 2.12 | 1.59 | 2.68 |
| 2001 | 6.22 | 5.23 | 5.84 | 3.83 | 2.36 | 1.62 | 1.73 | 1.79 | 2.16 | 1.35 | 1.77 | 1.34 |
| 2002 | 1.29 | 3.39 | 5.31 | 3.38 | 1.44 | 1.04 | 1.46 | 1.63 | 1.80 | 1.37 | 1.93 | 2.44 |
| 2003 | 4.06 | 4.55 | 5.38 | 3.57 | 1.47 | 1.12 | 1.29 | 1.12 | 1.48 | 1.54 | 0.71 | 1.77 |
| 2004 | 0.86 | 3.58 | 3.23 | 2.71 | 1.10 | 0.81 | 1.51 | 1.15 | 1.31 | 1.25 | 2.13 | 3.12 |
| 2005 | 3.88 | 3.74 | 4.92 | 3.90 | 1.21 | 0.97 | 1.14 | 1.08 | 1.22 | 0.93 | 0.70 | 1.15 |
| 2006 | 2.83 | 4.19 | 5.68 | 4.63 | 1.53 | 1.22 | 1.41 | 1.54 | 1.56 | 1.31 | 1.39 | 2.37 |
| 2007 | 4.56 | 4.81 | 5.82 | 4.31 | 1.84 | 1.41 | 1.46 | 1.60 | 1.97 | 1.60 | 1.26 | 1.01 |
| 2008 | 4.33 | 5.60 | 4.58 | 2.74 | 1.16 | 0.88 | 1.32 | 1.37 | 1.26 | 0.91 | 0.92 | 1.16 |
| 2009 | 3.49 | 6.71 | 5.79 | 3.45 | 1.57 | 1.18 | 1.50 | 1.44 | 1.63 | 1.78 | 3.07 | 4.49 |
| 2010 | 7.15 | 4.29 | 4.65 | 4.01 | 1.71 | 1.91 | 1.84 | 1.58 | 1.60 | 1.20 | 1.54 | 2.75 |
| 2011 | 3.64 | 6.61 | 8.03 | 6.12 | 2.42 | 1.60 | 1.65 | 1.56 | 1.99 | 2.01 | 1.78 | 1.47 |
| 2012 | 3.37 | 6.49 | 5.47 | 4.49 | 1.73 | 1.06 | 1.35 | 1.19 | 1.44 | 1.27 | 1.16 | 2.51 |
| 2013 | 0.96 | 6.77 | 6.79 | 2.88 | 1.38 | 1.53 | 1.67 | 1.78 | 2.07 | 1.93 | 1.69 | 2.83 |
| 2014 | 3.51 | 3.79 | 5.41 | 3.18 | 1.71 | 1.75 | 1.43 | 1.37 | 1.76 | 1.25 | 0.96 | 1.68 |
| 2015 | 3.94 | 4.51 | 5.27 | 3.47 | 1.91 | 1.02 | 1.64 | 1.48 | 1.52 | 1.59 | 1.20 | 1.22 |
| 2016 | 2.38 | 1.58 | 3.76 | 2.66 | 1.73 | 1.42 | 1.87 | 1.51 | 1.87 | 1.32 | 0.92 | 0.81 |
| 2017 | 0.93 | 2.46 | 4.14 | 1.91 | 1.02 | 1.04 | 1.55 | 1.73 | 2.04 | 1.39 | 1.21 | 1.05 |
| 2018 | 3.13 | 4.54 | 3.12 | 2.52 | 1.18 | 0.85 | 1.04 | 1.59 | 2.09 | 1.86 | 1.54 | 3.61 |
| 2019 | 1.19 | 4.59 | 3.29 | 2.26 | 1.59 | 1.06 | 1.21 | 1.49 | 1.50 | 1.44 | 1.42 | 2.14 |
| 2020 | 1.66 | 4.93 | 3.01 | 2.91 | 1.27 | 1.35 | 1.50 | 1.26 | 1.80 | 1.23 | 1.66 | 3.13 |
| 2021 | 2.84 | 3.70 | 4.55 | 4.62 | 2.30 | 1.76 | 1.85 | 1.47 | 1.62 | 1.04 | 1.52 | 2.78 |
| 2022 | 2.37 | 4.13 | 2.91 | 3.57 | 2.01 | 2.08 | 1.86 | 2.02 | 2.50 | 2.23 | 3.39 | 4.22 |
| 2023 | 6.12 | 2.07 | 4.39 | 2.41 | 1.40 | 1.08 | 1.25 | 1.12 | 1.31 | 1.22 | 1.28 | 2.14 |
| 2024 | 2.99 | 4.99 | 5.78 | 2.39 | 0.90 | 0.64 | 0.94 | 1.21 | 1.68 | 1.34 | 0.72 | 0.24 |
| 2025 | 2.35 | 5.41 | 4.02 | 1.85 | 1.38 | 1.40 | 1.36 | 1.12 | 1.38 | 1.43 | 1.70 | 1.51 |
| 2026 | 4.17 | 5.80 | 5.50 | 3.06 | 1.88 | 1.51 | 1.53 | 1.40 | 1.82 | 1.70 | 1.20 | 1.30 |
| 2027 | 2.60 | 5.61 | 9.23 | 5.03 | 2.35 | 1.47 | 1.38 | 1.64 | 1.66 | 2.02 | 2.33 | 1.86 |
| 2028 | 1.52 | 2.90 | 3.91 | 2.23 | 1.31 | 1.10 | 1.31 | 1.35 | 1.70 | 1.55 | 1.48 | 0.80 |
| 2029 | 1.95 | 1.59 | 2.21 | 1.67 | 0.58 | 1.03 | 1.11 | 1.32 | 1.64 | 1.20 | 1.42 | 3.31 |

2. Volúmenes turbinados mensuales y anuales en la minicentral hidroeléctrica en m³

Tabla de volúmenes turbinados mensuales y anuales (m³)

| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1965 | 3,057,966 | 3,749,760 | 4,151,520 | 4,017,600 | 3,281,247 | 2,860,837 | 3,863,259 | 3,656,554 | 4,017,600 | 3,613,140 | 3,214,966 | 4,055,119 |
| 1966 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,017,600 | 2,651,354 | 3,960,720 | 3,787,946 | 3,950,960 | 4,017,600 | 4,151,520 | 4,017,600 |
| 1967 | 3,985,890 | 3,749,760 | 4,151,520 | 4,017,600 | 3,664,660 | 2,456,663 | 4,151,520 | 4,151,520 | 4,017,600 | 4,151,520 | 4,017,600 | 3,482,416 |
| 1968 | 4,151,520 | 2,877,373 | 4,151,520 | 4,017,600 | 2,007,768 | 2,297,644 | 2,719,867 | 3,252,601 | 3,578,296 | 2,805,234 | 3,022,818 | 2,481,998 |
| 1969 | 2,093,795 | 3,749,760 | 4,151,520 | 4,017,600 | 3,336,020 | 2,138,625 | 3,164,900 | 3,827,720 | 4,017,600 | 3,496,747 | 3,791,410 | 4,151,520 |
| 1970 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 3,523,417 | 4,102,892 | 4,135,820 | 4,017,600 | 4,151,520 | 3,632,391 | 4,151,520 |
| 1971 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 3,530,043 | 3,829,026 | 4,151,520 | 4,017,600 | 3,517,287 | 2,631,895 | 4,151,520 |
| 1972 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 2,741,572 | 3,575,700 | 4,005,733 | 4,017,600 | 3,928,086 | 2,638,521 | 4,151,520 |
| 1973 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 3,980,597 | 4,151,520 | 3,814,027 | 4,017,600 | 4,151,520 | 4,017,600 | 4,151,520 |
| 1974 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 2,623,968 | 3,927,591 | 4,151,520 | 4,151,520 | 4,017,600 | 4,151,520 | 2,983,063 | 3,409,922 |
| 1975 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 3,795,075 | 3,959,113 | 4,151,520 | 4,017,600 | 3,599,447 | 3,526,378 | 3,127,195 |
| 1976 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 2,938,914 | 3,430,656 | 3,876,953 | 4,151,520 | 4,017,600 | 3,236,574 | 2,353,612 | 4,151,520 |
| 1977 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 2,741,572 | 3,575,700 | 3,937,267 | 4,017,600 | 4,151,520 | 4,017,600 | 4,151,520 |
| 1978 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 3,096,387 | 2,834,334 | 3,151,207 | 3,731,867 | 3,869,831 | 4,151,520 | 2,804,166 | 4,151,520 |
| 1979 | 3,376,940 | 3,749,760 | 4,151,520 | 4,017,600 | 3,431,874 | 2,622,308 | 3,637,320 | 3,903,033 | 4,017,600 | 3,127,027 | 2,201,218 | 763,890 |
| 1980 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 2,904,681 | 2,973,475 | 3,226,520 | 2,965,041 | 4,017,600 | 3,524,133 | 4,017,600 | 4,151,520 |
| 1981 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 3,520,880 | 3,629,430 | 4,151,520 | 3,677,094 | 4,017,600 | 4,151,520 | 4,017,600 | 4,151,520 |
| 1982 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 3,952,220 | 2,655,437 | 3,678,400 | 4,151,520 | 4,017,600 | 4,151,520 | 4,017,600 | 4,151,520 |
| 1983 | 4,151,520 | 3,571,445 | 4,151,520 | 4,017,600 | 3,267,554 | 3,801,700 | 3,281,293 | 3,519,621 | 4,017,600 | 3,188,647 | 2,300,605 | 4,151,520 |
| 1984 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 4,017,600 | 3,856,413 | 4,012,580 | 4,017,600 | 4,151,520 | 4,017,600 | 4,151,520 |
| 1985 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 4,017,600 | 4,151,520 | 3,903,033 | 4,017,600 | 2,955,861 | 3,055,947 | 4,151,520 |
| 1986 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 4,017,600 | 4,151,520 | 4,094,740 | 4,017,600 | 3,756,920 | 3,122,205 | 4,151,520 |
| 1987 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 2,534,961 | 2,191,631 | 3,507,233 | 3,512,774 | 3,624,677 | 3,448,820 | 3,234,843 | 4,151,520 |
| 1988 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 3,761,946 | 3,733,173 | 3,327,914 | 3,697,561 | 3,407,740 | 1,995,819 | 2,329,761 |
| 1989 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 2,980,101 | 3,979,653 | 3,273,141 | 4,017,600 | 4,151,520 | 4,017,600 | 4,151,520 |
| 1990 | 4,151,520 | 3,749,760 | 4,151,520 | 3,347,974 | 1,323,102 | 3,675,810 | 2,774,640 | 3,273,141 | 4,017,600 | 3,750,073 | 4,017,600 | 4,151,520 |
| 1991 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 3,404,152 | 4,089,199 | 3,389,534 | 3,989,096 | 3,845,926 | 3,234,843 | 2,293,514 |
| 1992 | 4,151,520 | 2,196,397 | 4,151,520 | 4,017,600 | 2,343,255 | 1,919,973 | 2,897,880 | 3,279,987 | 3,273,510 | 3,715,840 | 2,108,457 | 1,532,326 |
| 1993 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 2,715,069 | 3,297,773 | 3,601,780 | 4,017,600 | 4,151,520 | 4,017,600 | 4,151,520 |
| 1994 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 4,017,600 | 4,151,520 | 4,151,520 | 4,017,600 | 3,544,673 | 4,017,600 | 4,151,520 |
| 1995 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 3,438,720 | 2,887,340 | 3,603,086 | 3,882,493 | 4,017,600 | 3,332,427 | 4,017,600 | 4,151,520 |
| 1996 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 3,185,501 | 3,562,006 | 4,151,520 | 4,017,600 | 3,414,587 | 3,413,740 | 2,953,210 |
| 1997 | 4,151,520 | 3,749,760 | 4,151,520 | 3,621,580 | 3,233,320 | 3,516,791 | 4,151,520 | 4,151,520 | 4,017,600 | 3,476,207 | 4,017,600 | 4,151,520 |
| 1998 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 3,514,034 | 2,781,327 | 3,774,253 | 3,642,860 | 4,017,600 | 3,661,067 | 3,221,592 | 2,366,008 |
| 1999 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 3,682,436 | 3,657,860 | 4,151,520 | 4,017,600 | 4,023,940 | 2,744,534 | 4,151,520 |
| 2000 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 3,881,210 | 4,151,520 | 4,151,520 | 4,017,600 | 4,151,520 | 4,017,600 | 4,151,520 |
| 2001 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 4,017,600 | 4,151,520 | 4,151,520 | 4,017,600 | 3,606,293 | 4,017,600 | 3,583,908 |
| 2002 | 3,456,683 | 3,749,760 | 4,151,520 | 4,017,600 | 3,870,060 | 2,695,192 | 3,897,493 | 4,151,520 | 4,017,600 | 3,674,760 | 4,017,600 | 4,151,520 |
| 2003 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 3,945,373 | 2,900,592 | 3,452,460 | 3,012,968 | 3,830,077 | 4,126,640 | 1,850,051 | 4,151,520 |
| 2004 | 2,304,028 | 3,749,760 | 4,151,520 | 4,017,600 | 2,945,761 | 2,092,244 | 4,048,119 | 3,067,741 | 3,386,148 | 3,359,814 | 4,017,600 | 4,151,520 |
| 2005 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 3,233,320 | 2,503,044 | 3,041,660 | 2,903,421 | 3,154,245 | 2,483,441 | 1,803,670 | 3,083,699 |
| 2006 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,109,693 | 3,172,249 | 3,767,406 | 4,122,127 | 4,017,600 | 3,517,287 | 3,605,888 | 4,151,520 |
| 2007 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 3,642,681 | 3,911,186 | 4,151,520 | 4,017,600 | 4,151,520 | 3,274,598 | 2,706,730 |
| 2008 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 3,116,927 | 2,271,141 | 3,541,466 | 3,656,554 | 3,253,632 | 2,442,361 | 2,373,489 | 3,105,447 |
| 2009 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 3,116,927 | 3,059,611 | 4,020,732 | 3,848,260 | 4,017,600 | 4,151,520 | 4,017,600 | 4,151,520 |
| 2010 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 4,017,600 | 4,151,520 | 4,151,520 | 4,017,600 | 3,216,034 | 3,996,810 | 4,151,520 |
| 2011 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 4,017,600 | 4,151,520 | 4,151,520 | 4,017,600 | 4,151,520 | 4,017,600 | 3,939,129 |
| 2012 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 2,748,198 | 3,603,086 | 3,177,288 | 3,724,064 | 3,414,587 | 3,002,940 | 4,151,520 |
| 2013 | 2,572,256 | 3,749,760 | 4,151,520 | 4,017,600 | 3,692,047 | 3,960,720 | 4,151,520 | 4,151,520 | 4,017,600 | 4,151,520 | 4,017,600 | 4,151,520 |
| 2014 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 4,017,600 | 3,842,719 | 3,677,094 | 4,017,600 | 3,346,120 | 2,479,502 | 4,151,520 |
| 2015 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 2,642,185 | 4,151,520 | 3,964,653 | 3,936,089 | 4,151,520 | 3,122,205 | 3,272,183 |
| 2016 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 3,669,184 | 4,151,520 | 4,039,967 | 4,017,600 | 3,530,980 | 2,380,115 | 2,177,523 |
| 2017 | 2,485,263 | 3,749,760 | 4,151,520 | 4,017,600 | 2,719,821 | 2,688,566 | 4,151,520 | 4,151,520 | 4,017,600 | 3,729,533 | 3,128,830 | 2,800,972 |
| 2018 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 3,164,854 | 2,191,631 | 2,795,180 | 4,151,520 | 4,017,600 | 4,151,520 | 3,983,558 | 4,151,520 |
| 2019 | 3,181,206 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 2,754,824 | 3,240,213 | 3,978,347 | 3,889,709 | 3,866,466 | 3,692,023 | 4,151,520 |
| 2020 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 3,390,794 | 3,496,914 | 4,020,732 | 3,382,687 | 4,017,600 | 3,305,040 | 4,017,600 | 4,151,520 |
| 2021 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 4,017,600 | 4,151,520 | 3,937,267 | 4,017,600 | 2,784,694 | 3,943,804 | 4,151,520 |
| 2022 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 4,017,600 | 4,151,520 | 4,151,520 | 4,017,600 | 4,151,520 | 4,017,600 | 4,151,520 |
| 2023 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 3,753,667 | 2,807,830 | 3,336,067 | 3,012,968 | 3,392,774 | 3,277,654 | 3,314,353 | 4,151,520 |
| 2024 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 2,398,028 | 1,654,941 | 2,528,161 | 3,252,601 | 4,017,600 | 3,585,753 | 1,856,677 | 655,149 |
| 2025 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 3,685,200 | 3,616,178 | 3,637,320 | 3,006,121 | 3,565,045 | 3,839,080 | 4,017,600 | 4,047,870 |
| 2026 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 3,914,339 | 4,096,046 | 3,759,254 | 4,017,600 | 4,151,520 | 3,102,327 | 3,475,167 |
| 2027 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 4,151,520 | 3,821,578 | 3,698,939 | 4,151,520 | 4,017,600 | 4,151,520 | 4,017,600 | 4,151,520 |
| 2028 | 4,080,132 | 3,749,760 | 4,151,520 | 4,017,600 | 3,514,034 | 2,860,837 | 3,514,080 | 3,622,320 | 4,017,600 | 4,147,180 | 3,824,539 | 2,141,276 |
| 2029 | 4,151,520 | 3,749,760 | 4,151,520 | 4,017,600 | 1,555,889 | 2,675,314 | 2,966,347 | 3,526,467 | 4,017,600 | 3,202,340 | 3,692,023 | 4,151,520 |

3. Energía mensual y anual generada en la minicentral en kWh

Tabla de energía generada en la minicentral (kWh)

| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1965 | 3,538,461 | 4,338,956 | 4,803,844 | 4,648,882 | 3,796,826 | 3,310,357 | 4,470,289 | 4,231,104 | 4,648,882 | 4,180,869 | 3,720,130 | 4,692,296 |
| 1966 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 3,067,959 | 4,583,064 | 4,383,142 | 4,571,771 | 4,648,882 | 4,803,844 | 4,648,882 | 4,803,844 |
| 1967 | 4,612,188 | 4,338,956 | 4,803,844 | 4,648,882 | 4,240,484 | 2,842,676 | 4,803,844 | 4,803,844 | 4,648,882 | 4,803,844 | 4,648,882 | 4,029,605 |
| 1968 | 4,803,844 | 3,329,492 | 4,803,844 | 4,648,882 | 2,323,247 | 2,658,670 | 3,147,237 | 3,763,679 | 4,140,550 | 3,246,018 | 3,497,790 | 2,871,992 |
| 1969 | 2,422,791 | 4,338,956 | 4,803,844 | 4,648,882 | 3,860,206 | 2,474,665 | 3,662,198 | 4,429,166 | 4,648,882 | 4,046,187 | 4,387,151 | 4,803,844 |
| 1970 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 4,077,048 | 4,747,576 | 4,785,677 | 4,648,882 | 4,803,844 | 4,203,145 | 4,803,844 |
| 1971 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 4,084,715 | 4,430,677 | 4,803,844 | 4,648,882 | 4,069,955 | 3,045,443 | 4,803,844 |
| 1972 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 4,648,882 | 4,803,844 | 4,635,150 | 4,648,882 | 4,545,303 | 3,053,109 | 4,803,844 |
| 1973 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 4,606,064 | 4,803,844 | 4,413,321 | 4,648,882 | 4,803,844 | 4,648,882 | 4,803,844 |
| 1974 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 3,036,269 | 4,544,729 | 4,803,844 | 4,803,844 | 4,648,882 | 4,803,844 | 3,451,788 | 3,945,720 |
| 1975 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 4,391,391 | 4,581,204 | 4,803,844 | 4,648,882 | 4,165,024 | 4,080,475 | 3,618,568 |
| 1976 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 3,400,703 | 3,969,711 | 4,486,134 | 4,803,844 | 4,648,882 | 3,745,133 | 2,723,432 | 4,803,844 |
| 1977 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 3,172,353 | 4,137,546 | 4,555,926 | 4,648,882 | 4,803,844 | 4,648,882 | 4,803,844 |
| 1978 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 3,582,920 | 3,279,690 | 3,646,353 | 4,318,252 | 4,477,894 | 4,803,844 | 3,244,782 | 4,803,844 |
| 1979 | 3,907,555 | 4,338,956 | 4,803,844 | 4,648,882 | 3,971,121 | 3,034,349 | 4,208,848 | 4,516,313 | 4,648,882 | 3,618,374 | 2,547,094 | 883,919 |
| 1980 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 3,361,090 | 3,440,695 | 3,733,500 | 3,430,935 | 4,648,882 | 4,077,877 | 4,648,882 | 4,803,844 |
| 1981 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,074,113 | 4,199,718 | 4,803,844 | 4,254,872 | 4,648,882 | 4,803,844 | 4,648,882 | 4,803,844 |
| 1982 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,573,228 | 3,072,683 | 4,256,383 | 4,803,844 | 4,648,882 | 4,803,844 | 4,648,882 | 4,803,844 |
| 1983 | 4,803,844 | 4,132,622 | 4,803,844 | 4,648,882 | 3,780,981 | 4,399,058 | 3,796,880 | 4,072,655 | 4,648,882 | 3,689,676 | 2,662,097 | 4,803,844 |
| 1984 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 4,648,882 | 4,462,367 | 4,643,073 | 4,648,882 | 4,803,844 | 4,648,882 | 4,803,844 |
| 1985 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 4,648,882 | 4,803,844 | 4,516,313 | 4,648,882 | 3,420,312 | 3,536,124 | 4,803,844 |
| 1986 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 4,648,882 | 4,803,844 | 4,738,142 | 4,648,882 | 4,347,241 | 3,612,793 | 4,803,844 |
| 1987 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 2,933,277 | 2,536,000 | 4,058,321 | 4,064,733 | 4,194,219 | 3,990,730 | 3,743,131 | 4,803,844 |
| 1988 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 4,353,056 | 4,319,763 | 3,850,826 | 4,278,555 | 3,943,195 | 2,309,420 | 2,695,834 |
| 1989 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 3,448,362 | 4,604,971 | 3,787,446 | 4,648,882 | 4,803,844 | 4,648,882 | 4,803,844 |
| 1990 | 4,803,844 | 4,338,956 | 4,803,844 | 3,874,038 | 1,531,000 | 4,253,387 | 3,210,617 | 3,787,446 | 4,648,882 | 4,339,319 | 4,648,882 | 4,803,844 |
| 1991 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 3,939,044 | 4,731,731 | 3,922,128 | 4,615,899 | 4,500,233 | 3,743,131 | 2,653,891 |
| 1992 | 4,803,844 | 2,541,514 | 4,803,844 | 4,648,882 | 2,711,448 | 2,221,657 | 3,353,221 | 3,795,369 | 3,787,873 | 4,299,706 | 2,439,757 | 1,773,099 |
| 1993 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 3,141,685 | 4,082,088 | 4,167,725 | 4,648,882 | 4,803,844 | 4,648,882 | 4,803,844 |
| 1994 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 4,648,882 | 4,803,844 | 4,803,844 | 4,648,882 | 4,101,645 | 4,648,882 | 4,803,844 |
| 1995 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 3,979,043 | 3,341,025 | 4,169,236 | 4,492,546 | 4,648,882 | 3,856,048 | 4,648,882 | 4,803,844 |
| 1996 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 3,686,036 | 4,121,701 | 4,803,844 | 4,648,882 | 3,951,118 | 3,950,137 | 3,417,245 |
| 1997 | 4,803,844 | 4,338,956 | 4,803,844 | 4,190,636 | 3,741,369 | 4,069,381 | 4,803,844 | 4,803,844 | 4,648,882 | 4,022,420 | 4,648,882 | 4,803,844 |
| 1998 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,066,199 | 3,218,354 | 4,367,297 | 4,215,259 | 4,648,882 | 4,236,326 | 3,727,797 | 2,737,776 |
| 1999 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 4,261,054 | 4,232,615 | 4,803,844 | 4,648,882 | 4,656,217 | 3,175,780 | 4,803,844 |
| 2000 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 4,491,061 | 4,803,844 | 4,803,844 | 4,648,882 | 4,803,844 | 4,648,882 | 4,803,844 |
| 2001 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 4,648,882 | 4,803,844 | 4,803,844 | 4,648,882 | 4,172,947 | 4,648,882 | 4,147,044 |
| 2002 | 3,999,828 | 4,338,956 | 4,803,844 | 4,648,882 | 4,478,158 | 3,118,685 | 4,509,902 | 4,803,844 | 4,648,882 | 4,252,171 | 4,648,882 | 4,803,844 |
| 2003 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,565,306 | 3,356,359 | 3,994,941 | 3,486,392 | 4,431,893 | 4,775,054 | 2,140,748 | 4,803,844 |
| 2004 | 2,666,057 | 4,338,956 | 4,803,844 | 4,648,882 | 3,408,265 | 2,420,996 | 4,684,196 | 3,549,772 | 3,918,210 | 3,887,738 | 4,648,882 | 4,803,844 |
| 2005 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 3,741,369 | 2,896,344 | 3,519,593 | 3,359,633 | 3,649,869 | 2,873,662 | 2,887,079 | 3,568,238 |
| 2006 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,755,445 | 3,670,702 | 4,359,375 | 4,769,832 | 4,648,882 | 4,069,955 | 4,172,478 | 4,803,844 |
| 2007 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 4,215,052 | 4,525,747 | 4,803,844 | 4,648,882 | 4,803,844 | 3,789,132 | 3,132,036 |
| 2008 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 3,606,687 | 2,628,003 | 4,097,933 | 4,231,104 | 3,764,872 | 2,826,127 | 2,746,433 | 3,593,403 |
| 2009 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 4,240,364 | 4,652,506 | 4,452,933 | 4,648,882 | 4,803,844 | 4,648,882 | 4,803,844 |
| 2010 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 4,648,882 | 4,803,844 | 4,803,844 | 4,648,882 | 3,721,366 | 4,624,825 | 4,803,844 |
| 2011 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 4,648,882 | 4,803,844 | 4,803,844 | 4,648,882 | 4,803,844 | 4,648,882 | 4,558,080 |
| 2012 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 3,180,020 | 4,169,236 | 3,676,532 | 4,309,222 | 3,951,118 | 3,474,789 | 4,803,844 |
| 2013 | 2,976,432 | 4,338,956 | 4,803,844 | 4,648,882 | 4,272,174 | 4,583,064 | 4,803,844 | 4,803,844 | 4,648,882 | 4,803,844 | 4,648,882 | 4,803,844 |
| 2014 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 4,648,882 | 4,446,522 | 4,254,872 | 4,648,882 | 3,871,893 | 2,869,104 | 4,803,844 |
| 2015 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 3,057,349 | 4,803,844 | 4,587,615 | 4,554,563 | 4,803,844 | 3,612,793 | 3,786,338 |
| 2016 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 4,245,720 | 4,803,844 | 4,674,763 | 4,648,882 | 4,085,800 | 2,754,100 | 2,519,676 |
| 2017 | 2,875,770 | 4,338,956 | 4,803,844 | 4,648,882 | 3,147,184 | 3,111,018 | 4,803,844 | 4,803,844 | 4,648,882 | 4,315,551 | 3,620,460 | 3,241,086 |
| 2018 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 3,662,144 | 2,536,000 | 3,234,384 | 4,803,844 | 4,648,882 | 4,803,844 | 4,609,491 | 4,803,844 |
| 2019 | 3,681,065 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 3,187,687 | 3,749,345 | 4,603,460 | 4,500,895 | 4,474,001 | 4,272,147 | 4,803,844 |
| 2020 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 3,923,586 | 4,046,380 | 4,652,506 | 3,914,206 | 4,648,882 | 3,824,358 | 4,648,882 | 4,803,844 |
| 2021 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 4,648,882 | 4,803,844 | 4,555,926 | 4,648,882 | 3,222,251 | 4,563,490 | 4,803,844 |
| 2022 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 4,648,882 | 4,803,844 | 4,803,844 | 4,648,882 | 4,803,844 | 4,648,882 | 4,803,844 |
| 2023 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,343,477 | 3,249,022 | 3,860,259 | 3,486,392 | 3,925,877 | 3,792,668 | 3,835,134 | 4,803,844 |
| 2024 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 2,774,828 | 1,914,981 | 2,925,408 | 3,763,679 | 4,648,882 | 4,149,179 | 2,148,415 | 758,091 |
| 2025 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,264,252 | 4,184,385 | 4,208,848 | 3,478,470 | 4,125,217 | 4,442,311 | 4,648,882 | 4,683,907 |
| 2026 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 4,529,395 | 4,739,653 | 4,349,941 | 4,648,882 | 4,803,844 | 3,589,793 | 4,021,216 |
| 2027 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 4,803,844 | 4,422,059 | 4,280,150 | 4,803,844 | 4,648,882 | 4,803,844 | 4,648,882 | 4,803,844 |
| 2028 | 4,721,239 | 4,338,956 | 4,803,844 | 4,648,882 | 4,066,190 | 3,310,357 | 4,066,244 | 4,191,492 | 4,648,882 | 4,798,822 | 4,425,485 | 2,477,733 |
| 2029 | 4,803,844 | 4,338,956 | 4,803,844 | 4,648,882 | 1,800,364 | 3,095,684 | 3,432,446 | 4,080,577 | 4,648,882 | 3,705,521 | 4,272,147 | 4,803,844 |

4. Ingresos anuales del proyecto

Tabla de ingresos del proyecto (s/.)

| AÑO | ENERGÍA (GWh) | INGRESOS (s/.) | TOTAL |
|------|---------------|----------------|--------------|
| 2015 | - | - | - |
| 2016 | - | - | - |
| 2017 | - | - | - |
| 2018 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2019 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2020 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2021 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2022 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2023 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2024 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2025 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2026 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2027 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2028 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2029 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2030 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2031 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2032 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2033 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2034 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2035 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2036 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2037 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2038 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2039 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2040 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2041 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2042 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2043 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2044 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2045 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2046 | 51.92 | 9,571,284.71 | 9,571,284.71 |
| 2047 | 51.92 | 9,571,284.71 | 9,571,284.71 |

5. Egresos anuales del proyecto

Tabla de egresos del proyecto (s/.)

| AÑO | INVERSIÓN | PERSONAL | REPUESTOS Y CONSUMIBLES | OTROS COSTOS INDIRECTOS | OSINERGMIN DGE COES | CANON DE AGUA | TOTAL EGRESOS |
|------|------------|----------|----------------------------|----------------------------|------------------------|------------------|------------------|
| 2015 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2016 | 13,446,237 | 0 | 0 | 0 | 0 | 0 | 13,446,237 |
| 2017 | 31,374,553 | 0 | 0 | 0 | 0 | 0 | 31,374,553 |
| 2018 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2019 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2020 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2021 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2022 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2023 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2024 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2025 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2026 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2027 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2028 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2029 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2030 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2031 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2032 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2033 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2034 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2035 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2036 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2037 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2038 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2039 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2040 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2041 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2042 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2043 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2044 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2045 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2046 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |
| 2047 | 0 | 42,902 | 39,120 | 622,969 | 95,713 | 95,713 | 896,416 |

Para los egresos anuales del proyecto, se contempló gastos personal fijo, repuesto y combustible, pago al COES, Osinergmin y DGE (1% del ingreso anual) y Canon de agua (1% del ingreso por energía anual) según lo indica la LCE (Ley de Concesiones Eléctricas). Los valores de personal fijo, repuestos y combustibles fueron obtenidos de proyectos similares de minicentrales hidroeléctricas realizados por empresas peruanas.

6. Flujo económico

Tabla de flujo económico

| AÑO | TOTAL | TOTAL | FLUJO |
|------|-----------|------------|-------------|
| | INGRESOS | EGRESOS | ECONÓMICO |
| 2017 | 0 | 13,446,237 | -13,446,237 |
| 2018 | 0 | 31,374,553 | -31,374,553 |
| 2019 | 9,571,285 | 896,416 | 8,674,869 |
| 2020 | 9,571,285 | 896,416 | 8,674,869 |
| 2021 | 9,571,285 | 896,416 | 8,674,869 |
| 2022 | 9,571,285 | 896,416 | 8,674,869 |
| 2023 | 9,571,285 | 896,416 | 8,674,869 |
| 2024 | 9,571,285 | 896,416 | 8,674,869 |
| 2025 | 9,571,285 | 896,416 | 8,674,869 |
| 2026 | 9,571,285 | 896,416 | 8,674,869 |
| 2027 | 9,571,285 | 896,416 | 8,674,869 |
| 2028 | 9,571,285 | 896,416 | 8,674,869 |
| 2029 | 9,571,285 | 896,416 | 8,674,869 |
| 2030 | 9,571,285 | 896,416 | 8,674,869 |
| 2031 | 9,571,285 | 896,416 | 8,674,869 |
| 2032 | 9,571,285 | 896,416 | 8,674,869 |
| 2033 | 9,571,285 | 896,416 | 8,674,869 |
| 2034 | 9,571,285 | 896,416 | 8,674,869 |
| 2035 | 9,571,285 | 896,416 | 8,674,869 |
| 2036 | 9,571,285 | 896,416 | 8,674,869 |
| 2037 | 9,571,285 | 896,416 | 8,674,869 |
| 2038 | 9,571,285 | 896,416 | 8,674,869 |
| 2039 | 9,571,285 | 896,416 | 8,674,869 |
| 2040 | 9,571,285 | 896,416 | 8,674,869 |
| 2041 | 9,571,285 | 896,416 | 8,674,869 |
| 2042 | 9,571,285 | 896,416 | 8,674,869 |
| 2043 | 9,571,285 | 896,416 | 8,674,869 |
| 2044 | 9,571,285 | 896,416 | 8,674,869 |
| 2045 | 9,571,285 | 896,416 | 8,674,869 |
| 2046 | 9,571,285 | 896,416 | 8,674,869 |
| 2047 | 9,571,285 | 896,416 | 8,674,869 |
| 2048 | 9,571,285 | 896,416 | 8,674,869 |

El flujo económico es igual al total de ingresos menos el total de egresos

7. Indicadores económicos

Tabla de indicadores económicos para diferentes tasas

| ANÁLISIS ECONÓMICO | | | | |
|--------------------|----------------|----------------|----------------|--------------|
| TASA | VANB (US\$) | VANC (US\$) | VANE (US\$) | B/C (ECO) |
| 9% | 82,764,134.23 | 46,494,754.43 | 36,269,379.80 | 1.78 |
| 10% | 74,568,332.50 | 45,137,065.59 | 29,431,266.90 | 1.65 |
| 11% | 67,535,722.71 | 43,903,197.54 | 23,632,525.17 | 1.54 |
| 12% | 61,462,419.61 | 42,773,543.69 | 18,688,875.92 | 1.44 |
| 13% | 56,185,318.48 | 41,732,338.92 | 14,452,979.57 | 1.35 |
| 14% | 51,573,170.18 | 40,766,822.49 | 10,806,347.69 | 1.27 |
| 15% | 47,519,743.30 | 39,866,596.61 | 7,653,146.70 | 1.19 |
| 16% | 43,938,559.41 | 39,023,132.30 | 4,915,427.11 | 1.13 |
| 17% | 40,758,819.30 | 38,229,386.97 | 2,529,432.33 | 1.07 |
| 18% | 37,922,235.32 | 37,479,506.79 | 442,728.53 | 1.01 |
| 19% | 35,380,556.22 | 36,768,594.08 | (1,388,037.85) | 0.96 |
| 20% | 33,093,623.50 | 36,092,524.46 | (2,998,900.96) | 0.92 |
| 21% | 31,027,837.76 | 35,447,802.48 | (4,419,964.72) | 0.88 |
| 22% | 29,154,942.81 | 34,831,447.02 | (5,676,504.22) | 0.84 |
| | TIR | 18.23% | | |

Evaluación financiera para el $Q=1.55m^3/s$

Tabla de flujo financiero (s/.)

| CUOTA | INTERÉS | AMORTIZACIÓN | SALDO | FLUJO FINANCIERO |
|-----------|-----------|--------------|------------|------------------|
| 0 | 0 | 0 | 0 | -13,446,237 |
| 0 | 0 | 0 | 0 | -17,928,316 |
| 1,669,265 | 1,613,548 | 55,717 | 13,390,521 | 7,005,604 |
| 1,669,265 | 1,606,862 | 62,403 | 13,328,118 | 7,005,604 |
| 1,669,265 | 1,599,374 | 69,891 | 13,258,227 | 7,005,604 |
| 1,669,265 | 1,590,987 | 78,278 | 13,179,949 | 7,005,604 |
| 1,669,265 | 1,581,594 | 87,671 | 13,092,278 | 7,005,604 |
| 1,669,265 | 1,571,073 | 98,192 | 12,994,086 | 7,005,604 |
| 1,669,265 | 1,559,290 | 109,975 | 12,884,112 | 7,005,604 |
| 1,669,265 | 1,546,093 | 123,172 | 12,760,940 | 7,005,604 |
| 1,669,265 | 1,531,313 | 137,952 | 12,622,988 | 7,005,604 |
| 1,669,265 | 1,514,759 | 154,507 | 12,468,481 | 7,005,604 |
| 1,669,265 | 1,496,218 | 173,047 | 12,295,434 | 7,005,604 |
| 1,669,265 | 1,475,452 | 193,813 | 12,101,621 | 7,005,604 |
| 1,669,265 | 1,452,195 | 217,071 | 11,884,550 | 7,005,604 |
| 1,669,265 | 1,426,146 | 243,119 | 11,641,431 | 7,005,604 |
| 1,669,265 | 1,396,972 | 272,293 | 11,369,138 | 7,005,604 |
| 1,669,265 | 1,364,297 | 304,968 | 11,064,170 | 7,005,604 |
| 1,669,265 | 1,327,700 | 341,565 | 10,722,605 | 7,005,604 |
| 1,669,265 | 1,286,713 | 382,552 | 10,340,052 | 7,005,604 |
| 1,669,265 | 1,240,806 | 428,459 | 9,911,594 | 7,005,604 |
| 1,669,265 | 1,189,391 | 479,874 | 9,431,720 | 7,005,604 |
| 1,669,265 | 1,131,806 | 537,459 | 8,894,261 | 7,005,604 |
| 1,669,265 | 1,067,311 | 601,954 | 8,292,307 | 7,005,604 |
| 1,669,265 | 995,077 | 674,188 | 7,618,119 | 7,005,604 |
| 1,669,265 | 914,174 | 755,091 | 6,863,029 | 7,005,604 |
| 1,669,265 | 823,563 | 845,702 | 6,017,327 | 7,005,604 |
| 1,669,265 | 722,079 | 947,186 | 5,070,141 | 7,005,604 |
| 1,669,265 | 608,417 | 1,060,848 | 4,009,293 | 7,005,604 |
| 1,669,265 | 481,115 | 1,188,150 | 2,821,143 | 7,005,604 |
| 1,669,265 | 338,537 | 1,330,728 | 1,490,415 | 7,005,604 |
| 1,669,265 | 178,850 | 1,490,415 | -0 | 7,005,604 |

Tabla de indicadores financieros para diferentes tasas

| ANÁLISIS FINANCIERO | | | |
|---------------------|---------------------|------------------------------|--------------|
| VANF (US\$) | VANC(fin) (US\$) | VANC (fin+egresos) (US\$) | B/C (FIN) |
| 33,152,458.18 | 14,434,350.42 | 49,611,676.06 | 1.67 |
| 27,538,885.26 | 13,004,974.33 | 47,029,447.24 | 1.59 |
| 22,767,329.95 | 11,778,462.93 | 44,768,392.76 | 1.51 |
| 18,688,875.92 | 10,719,257.93 | 42,773,543.69 | 1.44 |
| 15,184,442.30 | 9,798,913.29 | 41,000,876.19 | 1.37 |
| 12,158,251.83 | 8,994,538.73 | 39,414,918.35 | 1.31 |
| 9,532,826.66 | 8,287,607.10 | 37,986,916.64 | 1.25 |
| 7,245,135.44 | 7,663,036.28 | 36,693,423.97 | 1.20 |
| 5,243,612.14 | 7,108,478.64 | 35,515,207.16 | 1.15 |
| 3,485,838.08 | 6,613,768.61 | 34,436,397.24 | 1.10 |
| 1,936,730.75 | 6,170,491.01 | 33,443,825.47 | 1.06 |
| 567,121.67 | 5,771,642.06 | 32,526,501.83 | 1.02 |
| (647,365.73) | 5,411,361.90 | 31,675,203.49 | 0.98 |
| (1,727,205.59) | 5,084,722.56 | 30,882,148.39 | 0.94 |
| | TIR | 20.45% | |

Evaluación económica para el $Q=1.50m^3/s$

1. Descargas medias mensuales y anuales para el caudal de captación $1.50 m^3/s$ captadas en la bocatoma

Tabla de descargas medias generadas mensuales y anuales en la bocatoma (m^3/s)

| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1965 | 1.14 | 4.10 | 3.81 | 1.67 | 1.23 | 1.10 | 1.44 | 1.37 | 1.59 | 1.35 | 1.24 | 1.51 |
| 1966 | 4.01 | 3.19 | 3.71 | 2.43 | 0.99 | 1.53 | 1.41 | 1.48 | 1.70 | 1.81 | 1.63 | 1.76 |
| 1967 | 1.49 | 7.76 | 7.21 | 2.42 | 1.37 | 0.95 | 1.63 | 1.92 | 2.17 | 2.31 | 1.78 | 1.30 |
| 1968 | 1.55 | 1.19 | 2.46 | 1.80 | 0.75 | 0.89 | 1.02 | 1.21 | 1.38 | 1.05 | 1.17 | 0.93 |
| 1969 | 0.78 | 2.36 | 3.14 | 3.13 | 1.25 | 0.83 | 1.18 | 1.43 | 1.62 | 1.31 | 1.46 | 4.15 |
| 1970 | 6.02 | 3.09 | 3.20 | 2.97 | 2.00 | 1.36 | 1.53 | 1.54 | 2.10 | 1.99 | 1.40 | 2.72 |
| 1971 | 3.67 | 4.90 | 7.02 | 3.94 | 1.79 | 1.36 | 1.43 | 1.66 | 1.83 | 1.31 | 1.02 | 1.83 |
| 1972 | 4.83 | 4.12 | 8.48 | 5.07 | 1.90 | 1.60 | 1.64 | 1.50 | 1.68 | 1.47 | 1.02 | 2.41 |
| 1973 | 5.27 | 7.28 | 7.00 | 5.56 | 2.04 | 1.54 | 1.66 | 1.42 | 2.02 | 1.83 | 1.90 | 3.40 |
| 1974 | 3.95 | 4.49 | 5.59 | 2.69 | 0.98 | 1.52 | 1.57 | 1.67 | 1.79 | 1.69 | 1.15 | 1.27 |
| 1975 | 2.27 | 2.46 | 6.61 | 2.86 | 1.74 | 1.46 | 1.48 | 1.58 | 2.24 | 1.34 | 1.36 | 1.17 |
| 1976 | 2.74 | 4.80 | 4.44 | 2.56 | 1.10 | 1.32 | 1.45 | 1.56 | 1.72 | 1.21 | 0.91 | 1.77 |
| 1977 | 1.65 | 6.12 | 3.89 | 2.34 | 1.64 | 1.06 | 1.34 | 1.47 | 1.67 | 1.56 | 2.19 | 1.91 |
| 1978 | 2.11 | 4.77 | 2.88 | 1.82 | 1.16 | 1.09 | 1.18 | 1.39 | 1.49 | 1.56 | 1.08 | 1.65 |
| 1979 | 1.26 | 4.64 | 6.15 | 3.04 | 1.28 | 1.01 | 1.36 | 1.46 | 2.20 | 1.17 | 0.85 | 0.29 |
| 1980 | 2.27 | 2.00 | 3.73 | 2.57 | 1.08 | 1.15 | 1.20 | 1.11 | 1.88 | 1.32 | 1.96 | 2.01 |
| 1981 | 2.70 | 7.45 | 6.07 | 2.68 | 1.31 | 1.40 | 1.62 | 1.37 | 1.61 | 1.79 | 1.90 | 2.52 |
| 1982 | 2.29 | 7.79 | 3.39 | 1.80 | 1.48 | 1.02 | 1.37 | 2.09 | 1.59 | 1.68 | 2.09 | 1.56 |
| 1983 | 2.39 | 1.48 | 3.77 | 3.75 | 1.22 | 1.47 | 1.23 | 1.31 | 1.62 | 1.19 | 0.89 | 1.79 |
| 1984 | 2.52 | 8.75 | 6.87 | 4.19 | 2.02 | 1.62 | 1.44 | 1.50 | 1.86 | 1.91 | 1.60 | 3.45 |
| 1985 | 2.06 | 3.63 | 5.04 | 3.95 | 1.78 | 1.60 | 1.73 | 1.46 | 1.74 | 1.10 | 1.18 | 2.24 |
| 1986 | 4.60 | 5.11 | 6.85 | 5.15 | 2.35 | 1.83 | 1.68 | 1.53 | 1.78 | 1.40 | 1.20 | 1.71 |
| 1987 | 4.75 | 4.86 | 3.17 | 1.67 | 0.95 | 0.85 | 1.31 | 1.31 | 1.40 | 1.29 | 1.25 | 2.30 |
| 1988 | 3.87 | 5.54 | 3.43 | 4.01 | 1.73 | 1.45 | 1.39 | 1.24 | 1.43 | 1.27 | 0.77 | 0.87 |
| 1989 | 4.13 | 6.43 | 6.05 | 4.11 | 1.80 | 1.15 | 1.49 | 1.22 | 1.57 | 1.59 | 1.56 | 1.88 |
| 1990 | 2.64 | 1.58 | 1.88 | 1.29 | 0.49 | 1.42 | 1.04 | 1.22 | 1.56 | 1.40 | 2.86 | 2.34 |
| 1991 | 2.09 | 2.64 | 5.23 | 2.42 | 1.80 | 1.31 | 1.53 | 1.27 | 1.54 | 1.44 | 1.25 | 0.86 |
| 1992 | 1.56 | 0.91 | 2.48 | 1.77 | 0.87 | 0.74 | 1.08 | 1.22 | 1.26 | 1.39 | 0.81 | 0.57 |
| 1993 | 2.13 | 4.18 | 5.11 | 3.48 | 1.85 | 1.05 | 1.32 | 1.34 | 1.65 | 1.65 | 2.95 | 4.17 |
| 1994 | 4.88 | 5.44 | 5.37 | 5.33 | 2.63 | 2.00 | 1.66 | 1.55 | 1.90 | 1.32 | 1.58 | 1.70 |
| 1995 | 2.64 | 2.30 | 3.77 | 3.54 | 1.28 | 1.11 | 1.35 | 1.45 | 1.62 | 1.24 | 1.62 | 2.10 |
| 1996 | 3.72 | 5.75 | 5.17 | 3.71 | 1.60 | 1.23 | 1.33 | 1.57 | 1.67 | 1.27 | 1.32 | 1.10 |
| 1997 | 2.25 | 4.51 | 2.97 | 1.40 | 1.21 | 1.36 | 1.70 | 1.73 | 1.96 | 1.30 | 1.68 | 2.71 |
| 1998 | 4.95 | 5.20 | 4.88 | 2.78 | 1.31 | 1.07 | 1.41 | 1.36 | 1.58 | 1.37 | 1.24 | 0.88 |
| 1999 | 1.58 | 4.98 | 4.84 | 3.78 | 2.29 | 1.42 | 1.37 | 1.60 | 1.82 | 1.50 | 1.06 | 2.72 |
| 2000 | 4.43 | 6.03 | 5.55 | 2.80 | 2.29 | 1.50 | 1.79 | 1.55 | 1.82 | 2.12 | 1.59 | 2.68 |
| 2001 | 6.22 | 5.23 | 5.84 | 3.83 | 2.36 | 1.62 | 1.73 | 1.79 | 2.16 | 1.35 | 1.77 | 1.34 |
| 2002 | 1.29 | 3.39 | 5.31 | 3.38 | 1.44 | 1.04 | 1.46 | 1.63 | 1.80 | 1.37 | 1.93 | 2.44 |
| 2003 | 4.06 | 4.55 | 5.38 | 3.57 | 1.47 | 1.12 | 1.29 | 1.12 | 1.48 | 1.54 | 0.71 | 1.77 |
| 2004 | 0.86 | 3.58 | 3.23 | 2.71 | 1.10 | 0.81 | 1.51 | 1.15 | 1.31 | 1.25 | 2.13 | 3.12 |
| 2005 | 3.88 | 3.74 | 4.92 | 3.90 | 1.21 | 0.97 | 1.14 | 1.08 | 1.22 | 0.93 | 0.70 | 1.15 |
| 2006 | 2.83 | 4.19 | 5.68 | 4.63 | 1.53 | 1.22 | 1.41 | 1.54 | 1.56 | 1.31 | 1.39 | 2.37 |
| 2007 | 4.56 | 4.81 | 5.82 | 4.31 | 1.84 | 1.41 | 1.46 | 1.60 | 1.97 | 1.60 | 1.26 | 1.01 |
| 2008 | 4.33 | 5.60 | 4.58 | 2.74 | 1.16 | 0.88 | 1.32 | 1.37 | 1.26 | 0.91 | 0.92 | 1.16 |
| 2009 | 3.49 | 6.71 | 5.79 | 3.45 | 1.57 | 1.18 | 1.50 | 1.44 | 1.63 | 1.78 | 3.07 | 4.49 |
| 2010 | 7.15 | 4.29 | 4.65 | 4.01 | 1.71 | 1.91 | 1.84 | 1.58 | 1.60 | 1.20 | 1.54 | 2.75 |
| 2011 | 3.64 | 6.61 | 8.03 | 6.12 | 2.42 | 1.60 | 1.65 | 1.56 | 1.99 | 2.01 | 1.78 | 1.47 |
| 2012 | 3.37 | 6.49 | 5.47 | 4.49 | 1.73 | 1.06 | 1.35 | 1.19 | 1.44 | 1.27 | 1.16 | 2.51 |
| 2013 | 0.96 | 6.77 | 6.79 | 2.88 | 1.38 | 1.53 | 1.67 | 1.78 | 2.07 | 1.93 | 1.69 | 2.83 |
| 2014 | 3.51 | 3.79 | 5.41 | 3.18 | 1.71 | 1.75 | 1.43 | 1.37 | 1.76 | 1.25 | 0.96 | 1.68 |
| 2015 | 3.94 | 4.51 | 5.27 | 3.47 | 1.91 | 1.02 | 1.64 | 1.48 | 1.52 | 1.59 | 1.20 | 1.22 |
| 2016 | 2.38 | 1.58 | 3.76 | 2.66 | 1.73 | 1.42 | 1.87 | 1.51 | 1.87 | 1.32 | 0.92 | 0.81 |
| 2017 | 0.93 | 2.46 | 4.14 | 1.91 | 1.02 | 1.04 | 1.55 | 1.73 | 2.04 | 1.39 | 1.21 | 1.05 |
| 2018 | 3.13 | 4.54 | 3.12 | 2.52 | 1.18 | 0.85 | 1.04 | 1.59 | 2.09 | 1.86 | 1.54 | 3.61 |
| 2019 | 1.19 | 4.59 | 3.29 | 2.26 | 1.59 | 1.06 | 1.21 | 1.49 | 1.50 | 1.44 | 1.42 | 2.14 |
| 2020 | 1.66 | 4.93 | 3.01 | 2.91 | 1.27 | 1.35 | 1.50 | 1.26 | 1.80 | 1.23 | 1.66 | 3.13 |
| 2021 | 2.84 | 3.70 | 4.55 | 4.62 | 2.30 | 1.76 | 1.85 | 1.47 | 1.62 | 1.04 | 1.52 | 2.78 |
| 2022 | 2.37 | 4.13 | 2.91 | 3.57 | 2.01 | 2.08 | 1.86 | 2.02 | 2.50 | 2.23 | 3.39 | 4.22 |
| 2023 | 6.12 | 2.07 | 4.39 | 2.41 | 1.40 | 1.08 | 1.25 | 1.12 | 1.31 | 1.22 | 1.28 | 2.14 |
| 2024 | 2.99 | 4.99 | 5.78 | 2.39 | 0.90 | 0.64 | 0.94 | 1.21 | 1.68 | 1.34 | 0.72 | 0.24 |
| 2025 | 2.35 | 5.41 | 4.02 | 1.85 | 1.38 | 1.40 | 1.36 | 1.12 | 1.38 | 1.43 | 1.70 | 1.51 |
| 2026 | 4.17 | 5.80 | 5.50 | 3.06 | 1.88 | 1.51 | 1.53 | 1.40 | 1.82 | 1.70 | 1.20 | 1.30 |
| 2027 | 2.60 | 5.61 | 9.23 | 5.03 | 2.35 | 1.47 | 1.38 | 1.64 | 1.66 | 2.02 | 2.33 | 1.86 |
| 2028 | 1.52 | 2.90 | 3.91 | 2.23 | 1.31 | 1.10 | 1.31 | 1.35 | 1.70 | 1.55 | 1.48 | 0.80 |
| 2029 | 1.95 | 1.59 | 2.21 | 1.67 | 0.58 | 1.03 | 1.11 | 1.32 | 1.64 | 1.20 | 1.42 | 3.31 |

2. Volúmenes turbinados mensuales y anuales en la minicentral hidroeléctrica en m³

Tabla de volúmenes turbinados mensuales y anuales (m³)

| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1965 | 3,057,966 | 3,628,800 | 4,017,600 | 3,888,000 | 3,281,247 | 2,860,837 | 3,863,259 | 3,656,554 | 3,888,000 | 3,613,140 | 3,214,966 | 4,017,600 |
| 1966 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 2,651,354 | 3,888,000 | 3,787,946 | 3,950,960 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 |
| 1967 | 3,985,890 | 3,628,800 | 4,017,600 | 3,888,000 | 3,664,660 | 2,456,663 | 4,017,600 | 4,017,600 | 3,888,000 | 4,017,600 | 3,888,000 | 3,482,416 |
| 1968 | 4,017,600 | 2,877,373 | 4,017,600 | 3,888,000 | 2,007,768 | 2,297,644 | 2,719,867 | 3,252,601 | 3,578,296 | 2,805,234 | 3,022,818 | 2,481,998 |
| 1969 | 2,093,795 | 3,628,800 | 4,017,600 | 3,888,000 | 3,336,020 | 2,138,625 | 3,164,900 | 3,827,720 | 3,888,000 | 3,496,747 | 3,791,410 | 4,017,600 |
| 1970 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,523,417 | 4,017,600 | 4,017,600 | 3,888,000 | 4,017,600 | 3,632,391 | 4,017,600 |
| 1971 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,530,043 | 3,829,026 | 4,017,600 | 3,888,000 | 3,517,287 | 2,631,895 | 4,017,600 |
| 1972 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 | 4,005,733 | 3,888,000 | 3,928,086 | 2,638,521 | 4,017,600 |
| 1973 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 | 3,814,027 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 |
| 1974 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 2,623,968 | 3,888,000 | 4,017,600 | 4,017,600 | 3,888,000 | 4,017,600 | 2,983,063 | 3,409,922 |
| 1975 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,795,075 | 3,959,113 | 4,017,600 | 3,888,000 | 3,599,447 | 3,526,378 | 3,127,195 |
| 1976 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 2,938,914 | 3,430,656 | 3,876,953 | 4,017,600 | 3,888,000 | 3,236,574 | 2,353,612 | 4,017,600 |
| 1977 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 2,741,572 | 3,575,700 | 3,937,267 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 |
| 1978 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 3,096,387 | 2,834,334 | 3,151,207 | 3,731,867 | 3,869,831 | 4,017,600 | 2,804,166 | 4,017,600 |
| 1979 | 3,376,940 | 3,628,800 | 4,017,600 | 3,888,000 | 3,431,874 | 2,622,308 | 3,637,320 | 3,903,033 | 3,888,000 | 3,127,027 | 2,201,218 | 763,890 |
| 1980 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 2,904,681 | 2,973,475 | 3,226,520 | 2,965,041 | 3,888,000 | 3,524,133 | 3,888,000 | 4,017,600 |
| 1981 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 3,520,880 | 3,629,430 | 4,017,600 | 3,677,094 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 |
| 1982 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 3,952,220 | 2,655,437 | 3,678,400 | 4,017,600 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 |
| 1983 | 4,017,600 | 3,571,445 | 4,017,600 | 3,888,000 | 3,267,554 | 3,801,700 | 3,281,293 | 3,519,621 | 3,888,000 | 3,188,647 | 2,300,605 | 4,017,600 |
| 1984 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,888,000 | 3,856,413 | 4,012,580 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 |
| 1985 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 | 3,903,033 | 3,888,000 | 2,955,861 | 3,055,947 | 4,017,600 |
| 1986 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 | 4,017,600 | 3,888,000 | 3,756,920 | 3,122,205 | 4,017,600 |
| 1987 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 2,534,961 | 2,191,631 | 3,507,233 | 3,512,774 | 3,624,677 | 3,448,820 | 3,234,843 | 4,017,600 |
| 1988 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,682,436 | 3,733,173 | 3,327,914 | 3,697,561 | 3,407,740 | 1,995,819 | 2,329,761 |
| 1989 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 2,980,101 | 3,979,653 | 3,273,141 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 |
| 1990 | 4,017,600 | 3,628,800 | 4,017,600 | 3,347,974 | 1,323,102 | 3,675,810 | 2,774,640 | 3,273,141 | 3,888,000 | 3,750,073 | 3,888,000 | 4,017,600 |
| 1991 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,404,152 | 4,017,600 | 3,389,534 | 3,888,000 | 3,845,926 | 3,234,843 | 2,293,514 |
| 1992 | 4,017,600 | 2,196,397 | 4,017,600 | 3,888,000 | 2,343,255 | 1,919,973 | 2,897,880 | 3,279,987 | 3,273,510 | 3,715,840 | 2,108,457 | 1,532,326 |
| 1993 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 2,715,069 | 3,527,773 | 3,601,780 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 |
| 1994 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,233,320 | 4,017,600 | 4,017,600 | 3,888,000 | 3,544,673 | 3,888,000 | 4,017,600 |
| 1995 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 3,438,720 | 2,887,340 | 3,603,086 | 3,882,493 | 3,888,000 | 3,332,427 | 3,888,000 | 4,017,600 |
| 1996 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,185,501 | 3,562,006 | 4,017,600 | 3,888,000 | 3,414,587 | 3,413,740 | 2,953,210 |
| 1997 | 4,017,600 | 3,628,800 | 4,017,600 | 3,621,580 | 3,233,320 | 3,516,791 | 4,017,600 | 4,017,600 | 3,888,000 | 3,476,207 | 3,888,000 | 4,017,600 |
| 1998 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 3,514,034 | 2,781,327 | 3,774,253 | 3,642,860 | 3,888,000 | 3,661,067 | 3,221,592 | 2,366,008 |
| 1999 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,682,436 | 3,657,860 | 4,017,600 | 3,888,000 | 4,017,600 | 2,744,534 | 4,017,600 |
| 2000 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,881,210 | 4,017,600 | 4,017,600 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 |
| 2001 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 | 4,017,600 | 3,888,000 | 3,606,293 | 3,888,000 | 3,583,908 |
| 2002 | 3,456,683 | 3,628,800 | 4,017,600 | 3,888,000 | 3,870,060 | 2,695,192 | 3,897,493 | 4,017,600 | 3,888,000 | 3,674,760 | 3,888,000 | 4,017,600 |
| 2003 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 3,945,373 | 2,900,592 | 3,452,460 | 3,012,968 | 3,830,077 | 4,017,600 | 1,850,051 | 4,017,600 |
| 2004 | 2,304,028 | 3,628,800 | 4,017,600 | 3,888,000 | 2,945,761 | 2,092,244 | 4,017,600 | 3,067,741 | 3,386,148 | 3,359,814 | 3,888,000 | 4,017,600 |
| 2005 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 3,233,320 | 2,503,044 | 3,041,660 | 2,903,421 | 3,154,245 | 2,483,441 | 1,803,670 | 3,083,699 |
| 2006 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,172,249 | 3,767,406 | 4,017,600 | 3,888,000 | 3,517,287 | 3,605,888 | 4,017,600 |
| 2007 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,642,681 | 3,911,186 | 4,017,600 | 3,888,000 | 4,017,600 | 3,274,598 | 2,706,730 |
| 2008 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 3,116,927 | 2,271,141 | 3,541,466 | 3,656,554 | 3,253,632 | 2,442,361 | 2,373,489 | 3,105,447 |
| 2009 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,059,611 | 4,017,600 | 3,848,260 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 |
| 2010 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 | 4,017,600 | 3,888,000 | 3,216,034 | 3,888,000 | 4,017,600 |
| 2011 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 | 4,017,600 | 3,888,000 | 4,017,600 | 3,888,000 | 3,939,129 |
| 2012 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 2,748,198 | 3,603,086 | 3,177,288 | 3,724,064 | 3,414,587 | 3,002,940 | 4,017,600 |
| 2013 | 2,572,256 | 3,628,800 | 4,017,600 | 3,888,000 | 3,692,047 | 3,888,000 | 4,017,600 | 4,017,600 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 |
| 2014 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,888,000 | 3,842,719 | 3,677,094 | 3,888,000 | 3,346,120 | 2,479,502 | 4,017,600 |
| 2015 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 2,642,185 | 4,017,600 | 3,964,653 | 3,888,000 | 4,017,600 | 3,122,205 | 3,272,183 |
| 2016 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,669,184 | 4,017,600 | 4,017,600 | 3,888,000 | 3,530,980 | 2,380,115 | 2,177,523 |
| 2017 | 2,485,263 | 3,628,800 | 4,017,600 | 3,888,000 | 2,719,821 | 2,688,566 | 4,017,600 | 4,017,600 | 3,888,000 | 3,729,533 | 3,128,830 | 2,800,972 |
| 2018 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 3,164,854 | 2,191,631 | 2,795,180 | 4,017,600 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 |
| 2019 | 3,181,206 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 2,754,824 | 3,240,213 | 3,978,347 | 3,888,000 | 3,866,466 | 3,692,023 | 4,017,600 |
| 2020 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 3,390,794 | 3,496,914 | 4,017,600 | 3,382,687 | 3,888,000 | 3,305,040 | 3,888,000 | 4,017,600 |
| 2021 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 | 3,937,267 | 3,888,000 | 2,784,694 | 3,888,000 | 4,017,600 |
| 2022 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 | 4,017,600 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 |
| 2023 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 3,753,667 | 2,807,830 | 3,336,067 | 3,012,968 | 3,392,774 | 3,277,654 | 3,314,353 | 4,017,600 |
| 2024 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 2,398,028 | 1,654,941 | 2,528,161 | 3,252,601 | 3,888,000 | 3,585,753 | 1,856,677 | 655,149 |
| 2025 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 3,685,200 | 3,616,178 | 3,637,320 | 3,006,121 | 3,565,045 | 3,839,080 | 3,888,000 | 4,017,600 |
| 2026 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 | 3,759,254 | 3,888,000 | 4,017,600 | 3,102,327 | 3,475,167 |
| 2027 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 4,017,600 | 3,821,578 | 3,698,939 | 4,017,600 | 3,888,000 | 4,017,600 | 3,888,000 | 4,017,600 |
| 2028 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 3,514,034 | 2,860,837 | 3,514,080 | 3,622,320 | 3,888,000 | 4,017,600 | 3,824,539 | 2,141,276 |
| 2029 | 4,017,600 | 3,628,800 | 4,017,600 | 3,888,000 | 1,555,889 | 2,675,314 | 2,966,347 | 3,526,467 | 3,888,000 | 3,202,340 | 3,692,023 | 4,017,600 |

3. Energía mensual y anual generada en la minicentral en kWh

Tabla de energía generada en la minicentral (kWh)

| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1965 | 3,548,590 | 4,211,009 | 4,662,189 | 4,511,796 | 3,807,694 | 3,319,833 | 4,483,085 | 4,243,216 | 4,511,796 | 4,192,837 | 3,730,779 | 4,662,189 |
| 1966 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 3,076,741 | 4,511,796 | 4,395,689 | 4,584,857 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 |
| 1967 | 4,625,391 | 4,211,009 | 4,662,189 | 4,511,796 | 4,252,623 | 2,850,813 | 4,662,189 | 4,662,189 | 4,511,796 | 4,662,189 | 4,511,796 | 4,041,139 |
| 1968 | 4,662,189 | 3,339,022 | 4,662,189 | 4,511,796 | 2,329,897 | 2,666,281 | 3,156,246 | 3,774,452 | 4,152,403 | 3,255,310 | 3,507,802 | 2,880,213 |
| 1969 | 2,429,726 | 4,211,009 | 4,662,189 | 4,511,796 | 3,871,256 | 2,481,748 | 3,672,681 | 4,441,844 | 4,511,796 | 4,057,769 | 4,399,709 | 4,662,189 |
| 1970 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 4,088,718 | 4,662,189 | 4,662,189 | 4,511,796 | 4,662,189 | 4,215,176 | 4,662,189 |
| 1971 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 4,096,407 | 4,443,360 | 4,662,189 | 4,511,796 | 4,081,605 | 3,054,160 | 4,662,189 |
| 1972 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 | 4,648,418 | 4,511,796 | 4,558,313 | 3,061,849 | 4,662,189 |
| 1973 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 | 4,425,954 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 |
| 1974 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 3,044,960 | 4,511,796 | 4,662,189 | 4,662,189 | 4,511,796 | 4,662,189 | 3,461,669 | 3,957,014 |
| 1975 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 4,403,961 | 4,594,318 | 4,662,189 | 4,511,796 | 4,176,946 | 4,092,155 | 3,628,926 |
| 1976 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 3,410,437 | 3,981,074 | 4,498,976 | 4,662,189 | 4,511,796 | 3,755,854 | 2,731,228 | 4,662,189 |
| 1977 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 3,181,434 | 4,149,389 | 4,568,967 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 |
| 1978 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 3,593,176 | 3,289,078 | 3,656,790 | 4,330,612 | 4,490,712 | 3,662,189 | 3,254,070 | 4,662,189 |
| 1979 | 3,918,740 | 4,211,009 | 4,662,189 | 4,511,796 | 3,982,488 | 3,043,034 | 4,220,896 | 4,529,241 | 4,511,796 | 3,628,731 | 2,554,385 | 886,449 |
| 1980 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 3,370,711 | 3,450,544 | 3,744,187 | 3,440,756 | 4,511,796 | 4,089,550 | 4,511,796 | 4,662,189 |
| 1981 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,085,775 | 4,211,740 | 4,662,189 | 4,267,051 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 |
| 1982 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,586,319 | 3,081,479 | 4,268,567 | 4,662,189 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 |
| 1983 | 4,662,189 | 4,144,452 | 4,662,189 | 4,511,796 | 3,791,804 | 4,411,650 | 3,807,748 | 4,084,313 | 4,511,796 | 3,700,238 | 2,669,717 | 4,662,189 |
| 1984 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 4,511,796 | 4,475,140 | 4,656,363 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 |
| 1985 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 | 4,529,241 | 4,511,796 | 3,430,103 | 3,546,246 | 4,662,189 |
| 1986 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 | 4,662,189 | 4,511,796 | 4,359,685 | 3,623,135 | 4,662,189 |
| 1987 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 2,941,674 | 2,543,259 | 4,069,938 | 4,076,368 | 4,206,225 | 4,002,153 | 3,753,845 | 4,662,189 |
| 1988 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 4,365,517 | 4,332,128 | 3,861,849 | 4,290,802 | 3,954,482 | 2,316,030 | 2,703,551 |
| 1989 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 3,458,232 | 4,618,153 | 3,798,288 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 |
| 1990 | 4,662,189 | 4,211,009 | 4,662,189 | 3,885,127 | 1,535,383 | 4,265,562 | 3,219,807 | 3,798,288 | 4,511,796 | 4,351,740 | 4,511,796 | 4,662,189 |
| 1991 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 3,950,319 | 4,662,189 | 3,933,355 | 4,511,796 | 4,462,972 | 3,753,845 | 2,661,488 |
| 1992 | 4,662,189 | 2,548,789 | 4,662,189 | 4,511,796 | 2,719,209 | 2,228,016 | 3,362,820 | 3,806,233 | 3,798,715 | 4,312,014 | 2,446,741 | 1,778,175 |
| 1993 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 3,150,678 | 4,093,773 | 4,179,655 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 |
| 1994 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 | 4,662,189 | 4,511,796 | 4,113,385 | 4,511,796 | 4,662,189 |
| 1995 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 3,990,433 | 3,350,589 | 4,181,170 | 4,505,406 | 4,511,796 | 3,867,086 | 4,511,796 | 4,662,189 |
| 1996 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 3,656,587 | 4,133,499 | 4,662,189 | 4,511,796 | 3,962,428 | 3,961,444 | 3,427,026 |
| 1997 | 4,662,189 | 4,211,009 | 4,662,189 | 4,202,631 | 3,752,078 | 4,081,029 | 4,662,189 | 4,662,189 | 4,511,796 | 4,033,934 | 4,511,796 | 4,662,189 |
| 1998 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,077,829 | 3,227,567 | 4,379,799 | 4,227,325 | 4,511,796 | 4,248,453 | 3,738,468 | 2,745,613 |
| 1999 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 4,273,251 | 4,244,731 | 4,662,189 | 4,511,796 | 4,662,189 | 3,184,870 | 4,662,189 |
| 2000 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 4,503,916 | 4,662,189 | 4,662,189 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 |
| 2001 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 | 4,662,189 | 4,511,796 | 4,184,892 | 4,511,796 | 4,158,914 |
| 2002 | 4,011,278 | 4,211,009 | 4,662,189 | 4,511,796 | 4,490,977 | 3,127,612 | 4,522,811 | 4,662,189 | 4,511,796 | 4,264,343 | 4,511,796 | 4,662,189 |
| 2003 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,578,374 | 3,365,966 | 4,006,377 | 3,496,372 | 4,444,579 | 4,662,189 | 2,146,876 | 4,662,189 |
| 2004 | 2,673,689 | 4,211,009 | 4,662,189 | 4,511,796 | 3,418,382 | 2,427,926 | 4,662,189 | 3,559,933 | 3,929,426 | 3,898,866 | 4,511,796 | 4,662,189 |
| 2005 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 3,752,078 | 2,904,635 | 3,529,668 | 3,369,250 | 3,660,316 | 2,881,888 | 2,093,054 | 3,578,451 |
| 2006 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 3,681,209 | 4,371,853 | 4,662,189 | 4,511,796 | 4,081,605 | 4,184,421 | 4,662,189 |
| 2007 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 4,227,118 | 4,538,701 | 4,662,189 | 4,511,796 | 4,662,189 | 3,799,979 | 3,141,001 |
| 2008 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 3,617,011 | 2,635,525 | 4,109,664 | 4,243,216 | 3,775,649 | 2,834,217 | 2,754,295 | 3,303,689 |
| 2009 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 3,550,499 | 4,662,189 | 4,465,680 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 |
| 2010 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 | 4,662,189 | 4,511,796 | 3,732,018 | 4,511,796 | 4,662,189 |
| 2011 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 | 4,662,189 | 4,511,796 | 4,662,189 | 4,511,796 | 4,571,127 |
| 2012 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 3,189,123 | 4,181,170 | 3,687,056 | 4,321,557 | 3,962,428 | 3,484,736 | 4,662,189 |
| 2013 | 2,984,952 | 4,211,009 | 4,662,189 | 4,511,796 | 4,284,403 | 4,511,796 | 4,662,189 | 4,662,189 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 |
| 2014 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 4,511,796 | 4,459,250 | 4,267,051 | 4,511,796 | 3,882,976 | 2,877,316 | 4,662,189 |
| 2015 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 3,066,101 | 4,662,189 | 4,600,747 | 4,511,796 | 4,662,189 | 3,623,135 | 3,797,177 |
| 2016 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 4,257,873 | 4,662,189 | 4,662,189 | 4,511,796 | 4,097,495 | 2,761,984 | 2,526,888 |
| 2017 | 2,884,002 | 4,211,009 | 4,662,189 | 4,511,796 | 3,156,192 | 3,119,923 | 4,662,189 | 4,662,189 | 4,511,796 | 4,327,904 | 3,630,824 | 3,250,364 |
| 2018 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 3,672,627 | 2,543,259 | 3,243,643 | 4,662,189 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 |
| 2019 | 3,691,602 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 3,196,812 | 3,760,077 | 4,616,638 | 4,511,796 | 4,486,807 | 4,284,376 | 4,662,189 |
| 2020 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 3,934,817 | 4,057,963 | 4,662,189 | 3,925,410 | 4,511,796 | 3,835,305 | 4,511,796 | 4,662,189 |
| 2021 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 | 4,568,967 | 4,511,796 | 3,231,474 | 4,511,796 | 4,662,189 |
| 2022 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 | 4,662,189 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 |
| 2023 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,355,910 | 3,258,322 | 3,871,309 | 3,496,372 | 3,937,115 | 3,803,525 | 3,846,112 | 4,662,189 |
| 2024 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 2,782,771 | 1,920,462 | 2,933,782 | 3,774,452 | 4,511,796 | 4,161,056 | 2,154,564 | 760,261 |
| 2025 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,276,458 | 4,196,362 | 4,220,896 | 3,488,427 | 4,137,025 | 4,455,027 | 4,511,796 | 4,662,189 |
| 2026 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 | 4,362,393 | 4,511,796 | 4,662,189 | 3,600,068 | 4,032,727 |
| 2027 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,662,189 | 4,434,717 | 4,292,402 | 4,662,189 | 4,511,796 | 4,662,189 | 4,511,796 | 4,662,189 |
| 2028 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 4,077,829 | 3,319,833 | 4,077,883 | 4,203,490 | 4,511,796 | 4,662,189 | 4,438,153 | 2,484,825 |
| 2029 | 4,662,189 | 4,211,009 | 4,662,189 | 4,511,796 | 1,805,518 | 3,104,545 | 3,442,271 | 4,092,258 | 4,511,796 | 3,716,128 | 4,284,376 | 4,662,189 |

4. Ingresos anuales del proyecto

Tabla de ingresos del proyecto (s/.)

| AÑO | ENERGÍA (GWh) | INGRESOS (s/.) | TOTAL |
|------|---------------|----------------|--------------|
| 2015 | - | - | - |
| 2016 | - | - | - |
| 2017 | - | - | - |
| 2018 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2019 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2020 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2021 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2022 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2023 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2024 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2025 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2026 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2027 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2028 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2029 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2030 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2031 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2032 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2033 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2034 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2035 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2036 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2037 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2038 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2039 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2040 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2041 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2042 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2043 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2044 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2045 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2046 | 50.95 | 9,392,201.71 | 9,392,201.71 |
| 2047 | 50.95 | 9,392,201.71 | 9,392,201.71 |

5. Egresos anuales del proyecto

Tabla de egresos del proyecto (s/.)

| AÑO | INVERSIÓN | PERSONAL | REPUESTOS Y | OTROS COSTOS | OSINERGMIN | CANON DE | TOTAL |
|------|------------|----------|-------------|--------------|------------|----------|------------|
| | | | CONSUMIBLES | INDIRECTOS | DGE COES | AGUA | |
| 2015 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2016 | 13,298,511 | 0 | 0 | 0 | 0 | 0 | 13,298,511 |
| 2017 | 31,029,859 | 0 | 0 | 0 | 0 | 0 | 31,029,859 |
| 2018 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2019 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2020 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2021 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2022 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2023 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2024 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2025 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2026 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2027 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2028 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2029 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2030 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2031 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2032 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2033 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2034 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2035 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2036 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2037 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2038 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2039 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2040 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2041 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2042 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2043 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2044 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2045 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2046 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |
| 2047 | 0 | 42,902 | 39,120 | 616,702 | 93,922 | 93,922 | 886,567 |

Para los egresos anuales del proyecto, se contempló gastos personal fijo, repuesto y combustible, pago al COES, Osinergmin y DGE (1% del ingreso anual) y Canon de agua (1% del ingreso por energía anual) según lo indica la LCE (Ley de Concesiones Eléctricas). Los valores de personal fijo, repuestos y combustibles fueron obtenidos de proyectos similares de minicentrales hidroeléctricas realizados por empresas peruanas.

6. Flujo económico

Tabla de flujo económico

| AÑO | TOTAL | TOTAL | FLUJO |
|------|-----------|------------|-------------|
| | INGRESOS | EGRESOS | ECONÓMICO |
| 2017 | 0 | 13,298,511 | -13,298,511 |
| 2018 | 0 | 31,029,859 | -31,029,859 |
| 2019 | 9,392,202 | 886,567 | 8,505,634 |
| 2020 | 9,392,202 | 886,567 | 8,505,634 |
| 2021 | 9,392,202 | 886,567 | 8,505,634 |
| 2022 | 9,392,202 | 886,567 | 8,505,634 |
| 2023 | 9,392,202 | 886,567 | 8,505,634 |
| 2024 | 9,392,202 | 886,567 | 8,505,634 |
| 2025 | 9,392,202 | 886,567 | 8,505,634 |
| 2026 | 9,392,202 | 886,567 | 8,505,634 |
| 2027 | 9,392,202 | 886,567 | 8,505,634 |
| 2028 | 9,392,202 | 886,567 | 8,505,634 |
| 2029 | 9,392,202 | 886,567 | 8,505,634 |
| 2030 | 9,392,202 | 886,567 | 8,505,634 |
| 2031 | 9,392,202 | 886,567 | 8,505,634 |
| 2032 | 9,392,202 | 886,567 | 8,505,634 |
| 2033 | 9,392,202 | 886,567 | 8,505,634 |
| 2034 | 9,392,202 | 886,567 | 8,505,634 |
| 2035 | 9,392,202 | 886,567 | 8,505,634 |
| 2036 | 9,392,202 | 886,567 | 8,505,634 |
| 2037 | 9,392,202 | 886,567 | 8,505,634 |
| 2038 | 9,392,202 | 886,567 | 8,505,634 |
| 2039 | 9,392,202 | 886,567 | 8,505,634 |
| 2040 | 9,392,202 | 886,567 | 8,505,634 |
| 2041 | 9,392,202 | 886,567 | 8,505,634 |
| 2042 | 9,392,202 | 886,567 | 8,505,634 |
| 2043 | 9,392,202 | 886,567 | 8,505,634 |
| 2044 | 9,392,202 | 886,567 | 8,505,634 |
| 2045 | 9,392,202 | 886,567 | 8,505,634 |
| 2046 | 9,392,202 | 886,567 | 8,505,634 |
| 2047 | 9,392,202 | 886,567 | 8,505,634 |
| 2048 | 9,392,202 | 886,567 | 8,505,634 |

El flujo económico es igual al total de ingresos menos el total de egresos

7. Indicadores económicos

Tabla de indicadores económicos para diferentes tasas

| ANÁLISIS ECONÓMICO | | | | |
|--------------------|----------------|----------------|----------------|--------------|
| TASA | VANB (US\$) | VANC (US\$) | VANE (US\$) | B/C (ECO) |
| 9% | 81,215,580.44 | 45,983,943.21 | 35,231,637.23 | 1.77 |
| 10% | 73,173,125.80 | 44,641,170.52 | 28,531,955.28 | 1.64 |
| 11% | 66,272,099.27 | 43,420,858.27 | 22,851,241.01 | 1.53 |
| 12% | 60,312,430.38 | 42,303,615.28 | 18,008,815.10 | 1.43 |
| 13% | 55,134,066.17 | 41,273,849.63 | 13,860,216.54 | 1.34 |
| 14% | 50,608,213.21 | 40,318,940.78 | 10,289,272.43 | 1.26 |
| 15% | 46,630,627.75 | 39,428,605.16 | 7,202,022.59 | 1.18 |
| 16% | 43,116,449.41 | 38,594,407.51 | 4,522,041.90 | 1.12 |
| 17% | 39,996,203.64 | 37,809,382.60 | 2,186,821.04 | 1.06 |
| 18% | 37,212,693.42 | 37,067,740.93 | 144,952.49 | 1.00 |
| 19% | 34,718,570.27 | 36,364,638.61 | (1,646,068.34) | 0.95 |
| 20% | 32,474,427.07 | 35,695,996.58 | (3,221,569.51) | 0.91 |
| 21% | 30,447,293.11 | 35,058,357.79 | (4,611,064.69) | 0.87 |
| 22% | 28,609,440.85 | 34,448,773.88 | (5,839,333.03) | 0.83 |
| | TIR | 18.08% | | |

Evaluación financiera para el $Q=1.50m^3/s$

Tabla de flujo financiero (s/.)

| INTERÉS | AMORTIZACIÓN | SALDO | FLUJO FINANCIERO |
|-----------|--------------|------------|------------------|
| 0 | 0 | 0 | -13,298,511 |
| 0 | 0 | 0 | -17,731,348 |
| 1,595,821 | 55,104 | 13,243,407 | 6,854,709 |
| 1,589,209 | 61,717 | 13,181,690 | 6,854,709 |
| 1,581,803 | 69,123 | 13,112,567 | 6,854,709 |
| 1,573,508 | 77,418 | 13,035,149 | 6,854,709 |
| 1,564,218 | 86,708 | 12,948,441 | 6,854,709 |
| 1,553,813 | 97,113 | 12,851,328 | 6,854,709 |
| 1,542,159 | 108,766 | 12,742,561 | 6,854,709 |
| 1,529,107 | 121,818 | 12,620,743 | 6,854,709 |
| 1,514,489 | 136,437 | 12,484,306 | 6,854,709 |
| 1,498,117 | 152,809 | 12,331,497 | 6,854,709 |
| 1,479,780 | 171,146 | 12,160,351 | 6,854,709 |
| 1,459,242 | 191,684 | 11,968,667 | 6,854,709 |
| 1,436,240 | 214,686 | 11,753,982 | 6,854,709 |
| 1,410,478 | 240,448 | 11,513,534 | 6,854,709 |
| 1,381,624 | 269,302 | 11,244,232 | 6,854,709 |
| 1,349,308 | 301,618 | 10,942,614 | 6,854,709 |
| 1,313,114 | 337,812 | 10,604,802 | 6,854,709 |
| 1,272,576 | 378,350 | 10,226,452 | 6,854,709 |
| 1,227,174 | 423,752 | 9,802,701 | 6,854,709 |
| 1,176,324 | 474,602 | 9,328,099 | 6,854,709 |
| 1,119,372 | 531,554 | 8,796,545 | 6,854,709 |
| 1,055,585 | 595,340 | 8,201,205 | 6,854,709 |
| 984,145 | 666,781 | 7,534,423 | 6,854,709 |
| 904,131 | 746,795 | 6,787,628 | 6,854,709 |
| 814,515 | 836,410 | 5,951,218 | 6,854,709 |
| 714,146 | 936,780 | 5,014,438 | 6,854,709 |
| 601,733 | 1,049,193 | 3,965,245 | 6,854,709 |
| 475,829 | 1,175,096 | 2,790,149 | 6,854,709 |
| 334,818 | 1,316,108 | 1,474,041 | 6,854,709 |
| 176,885 | 1,474,041 | -0 | 6,854,709 |

Tabla de indicadores financieros para diferentes tasas

| ANÁLISIS FINANCIERO | | | |
|----------------------|----------------------|---------------------------|-------------|
| VANF (US\$) | VANC(fin) (US\$) | VANC (fin+egresos) (US\$) | B/C (FIN) |
| 32,148,959.43 | 14,275,768.48 | 49,066,621.01 | 1.66 |
| 26,660,364.14 | 12,862,096.13 | 46,512,761.66 | 1.57 |
| 21,995,551.19 | 11,649,059.71 | 44,276,548.09 | 1.50 |
| 18,008,815.10 | 10,601,491.59 | 42,303,615.28 | 1.43 |
| 14,583,643.10 | 9,691,258.25 | 40,550,423.06 | 1.36 |
| 11,626,323.97 | 8,895,720.88 | 38,981,889.23 | 1.30 |
| 9,061,051.59 | 8,196,555.91 | 37,569,576.16 | 1.24 |
| 6,826,155.05 | 7,578,846.89 | 36,290,294.35 | 1.19 |
| 4,871,181.71 | 7,030,381.86 | 35,125,021.93 | 1.14 |
| 3,154,629.14 | 6,541,106.93 | 34,058,064.28 | 1.09 |
| 1,642,172.94 | 6,102,699.36 | 33,076,397.33 | 1.05 |
| 305,275.27 | 5,708,232.34 | 32,169,151.80 | 1.01 |
| (879,913.08) | 5,351,910.37 | 31,327,206.18 | 0.97 |
| (1,933,423.08) | 5,028,859.63 | 30,542,863.93 | 0.94 |
| | TIR | 20.25% | |

Evaluación económica para el $Q=1.47m^3/s$

1. Descargas medias mensuales y anuales para el caudal de captación $1.47 m^3/s$ captadas en la bocatoma

Tabla de descargas medias generadas mensuales y anuales en la bocatoma (m^3/s)

| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC | PROMEDIO |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
| 1965 | 1.14 | 1.47 | 1.47 | 1.47 | 1.23 | 1.10 | 1.44 | 1.37 | 1.47 | 1.35 | 1.24 | 1.47 | 1.35 |
| 1966 | 1.47 | 1.47 | 1.47 | 1.47 | 0.99 | 1.47 | 1.41 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.43 |
| 1967 | 1.47 | 1.47 | 1.47 | 1.47 | 1.37 | 0.95 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.30 | 1.40 |
| 1968 | 1.47 | 1.19 | 1.47 | 1.47 | 0.75 | 0.89 | 1.02 | 1.21 | 1.38 | 1.05 | 1.17 | 0.93 | 1.17 |
| 1969 | 0.78 | 1.47 | 1.47 | 1.47 | 1.25 | 0.83 | 1.18 | 1.43 | 1.47 | 1.31 | 1.46 | 1.47 | 1.30 |
| 1970 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.36 | 1.47 | 1.47 | 1.47 | 1.47 | 1.40 | 1.47 | 1.46 |
| 1971 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.36 | 1.43 | 1.47 | 1.47 | 1.31 | 1.02 | 1.47 | 1.41 |
| 1972 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.02 | 1.47 | 1.43 |
| 1973 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.42 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 |
| 1974 | 1.47 | 1.47 | 1.47 | 1.47 | 0.98 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.15 | 1.27 | 1.39 |
| 1975 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.46 | 1.47 | 1.47 | 1.47 | 1.34 | 1.36 | 1.17 | 1.42 |
| 1976 | 1.47 | 1.47 | 1.47 | 1.47 | 1.10 | 1.32 | 1.45 | 1.47 | 1.47 | 1.21 | 0.91 | 1.47 | 1.36 |
| 1977 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.06 | 1.34 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.42 |
| 1978 | 1.47 | 1.47 | 1.47 | 1.47 | 1.16 | 1.09 | 1.18 | 1.39 | 1.47 | 1.47 | 1.08 | 1.47 | 1.35 |
| 1979 | 1.26 | 1.47 | 1.47 | 1.47 | 1.28 | 1.01 | 1.36 | 1.46 | 1.47 | 1.17 | 0.85 | 0.29 | 1.21 |
| 1980 | 1.47 | 1.47 | 1.47 | 1.47 | 1.08 | 1.15 | 1.20 | 1.11 | 1.47 | 1.32 | 1.47 | 1.47 | 1.35 |
| 1981 | 1.47 | 1.47 | 1.47 | 1.47 | 1.31 | 1.40 | 1.47 | 1.37 | 1.47 | 1.47 | 1.47 | 1.47 | 1.44 |
| 1982 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.02 | 1.37 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.42 |
| 1983 | 1.47 | 1.47 | 1.47 | 1.47 | 1.22 | 1.47 | 1.23 | 1.31 | 1.47 | 1.19 | 0.89 | 1.47 | 1.34 |
| 1984 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.44 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 |
| 1985 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.46 | 1.47 | 1.10 | 1.18 | 1.47 | 1.41 |
| 1986 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.40 | 1.20 | 1.47 | 1.44 |
| 1987 | 1.47 | 1.47 | 1.47 | 1.47 | 0.95 | 0.85 | 1.31 | 1.31 | 1.40 | 1.29 | 1.25 | 1.47 | 1.31 |
| 1988 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.45 | 1.39 | 1.24 | 1.43 | 1.27 | 0.77 | 0.87 | 1.31 |
| 1989 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.15 | 1.47 | 1.22 | 1.47 | 1.47 | 1.47 | 1.47 | 1.42 |
| 1990 | 1.47 | 1.47 | 1.47 | 1.29 | 0.49 | 1.42 | 1.04 | 1.22 | 1.47 | 1.40 | 1.47 | 1.47 | 1.31 |
| 1991 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.31 | 1.47 | 1.27 | 1.47 | 1.44 | 1.25 | 0.86 | 1.37 |
| 1992 | 1.47 | 0.91 | 1.47 | 1.47 | 0.87 | 0.74 | 1.08 | 1.22 | 1.26 | 1.39 | 0.81 | 0.57 | 1.11 |
| 1993 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.05 | 1.32 | 1.34 | 1.47 | 1.47 | 1.47 | 1.47 | 1.41 |
| 1994 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.32 | 1.47 | 1.47 | 1.46 |
| 1995 | 1.47 | 1.47 | 1.47 | 1.47 | 1.28 | 1.11 | 1.35 | 1.45 | 1.47 | 1.24 | 1.47 | 1.47 | 1.39 |
| 1996 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.23 | 1.33 | 1.47 | 1.47 | 1.27 | 1.32 | 1.10 | 1.38 |
| 1997 | 1.47 | 1.47 | 1.47 | 1.40 | 1.21 | 1.36 | 1.47 | 1.47 | 1.47 | 1.30 | 1.47 | 1.47 | 1.42 |
| 1998 | 1.47 | 1.47 | 1.47 | 1.47 | 1.31 | 1.07 | 1.41 | 1.36 | 1.47 | 1.37 | 1.24 | 0.88 | 1.33 |
| 1999 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.42 | 1.37 | 1.47 | 1.47 | 1.47 | 1.06 | 1.47 | 1.42 |
| 2000 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 |
| 2001 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.35 | 1.47 | 1.34 | 1.45 |
| 2002 | 1.29 | 1.47 | 1.47 | 1.47 | 1.44 | 1.04 | 1.46 | 1.47 | 1.47 | 1.37 | 1.47 | 1.47 | 1.41 |
| 2003 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.12 | 1.29 | 1.12 | 1.47 | 1.47 | 0.71 | 1.47 | 1.33 |
| 2004 | 0.86 | 1.47 | 1.47 | 1.47 | 1.10 | 0.81 | 1.47 | 1.15 | 1.31 | 1.25 | 1.47 | 1.47 | 1.27 |
| 2005 | 1.47 | 1.47 | 1.47 | 1.47 | 1.21 | 0.97 | 1.14 | 1.08 | 1.22 | 0.93 | 0.70 | 1.15 | 1.19 |
| 2006 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.22 | 1.41 | 1.47 | 1.47 | 1.31 | 1.39 | 1.47 | 1.42 |
| 2007 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.41 | 1.46 | 1.47 | 1.47 | 1.47 | 1.26 | 1.01 | 1.41 |
| 2008 | 1.47 | 1.47 | 1.47 | 1.47 | 1.16 | 0.88 | 1.32 | 1.37 | 1.26 | 0.91 | 0.92 | 1.16 | 1.24 |
| 2009 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.18 | 1.47 | 1.44 | 1.47 | 1.47 | 1.47 | 1.47 | 1.44 |
| 2010 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.20 | 1.47 | 1.47 | 1.45 |
| 2011 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 |
| 2012 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.06 | 1.35 | 1.19 | 1.44 | 1.27 | 1.16 | 1.47 | 1.36 |
| 2013 | 0.96 | 1.47 | 1.47 | 1.47 | 1.38 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.42 |
| 2014 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.43 | 1.37 | 1.47 | 1.25 | 0.96 | 1.47 | 1.40 |
| 2015 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.02 | 1.47 | 1.47 | 1.47 | 1.47 | 1.20 | 1.22 | 1.39 |
| 2016 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.42 | 1.47 | 1.47 | 1.47 | 1.32 | 0.92 | 0.81 | 1.35 |
| 2017 | 0.93 | 1.47 | 1.47 | 1.47 | 1.02 | 1.04 | 1.47 | 1.47 | 1.47 | 1.39 | 1.21 | 1.05 | 1.29 |
| 2018 | 1.47 | 1.47 | 1.47 | 1.47 | 1.18 | 0.85 | 1.04 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.36 |
| 2019 | 1.19 | 1.47 | 1.47 | 1.47 | 1.47 | 1.06 | 1.21 | 1.47 | 1.47 | 1.44 | 1.42 | 1.47 | 1.38 |
| 2020 | 1.47 | 1.47 | 1.47 | 1.47 | 1.27 | 1.35 | 1.47 | 1.26 | 1.47 | 1.23 | 1.47 | 1.47 | 1.41 |
| 2021 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.04 | 1.47 | 1.47 | 1.43 |
| 2022 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 |
| 2023 | 1.47 | 1.47 | 1.47 | 1.47 | 1.40 | 1.08 | 1.25 | 1.12 | 1.31 | 1.22 | 1.28 | 1.47 | 1.33 |
| 2024 | 1.47 | 1.47 | 1.47 | 1.47 | 0.90 | 0.64 | 0.94 | 1.21 | 1.47 | 1.34 | 0.72 | 0.24 | 1.11 |
| 2025 | 1.47 | 1.47 | 1.47 | 1.47 | 1.38 | 1.40 | 1.36 | 1.12 | 1.38 | 1.43 | 1.47 | 1.47 | 1.41 |
| 2026 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.40 | 1.47 | 1.47 | 1.20 | 1.30 | 1.43 |
| 2027 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.38 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.46 |
| 2028 | 1.47 | 1.47 | 1.47 | 1.47 | 1.31 | 1.10 | 1.31 | 1.35 | 1.47 | 1.47 | 1.47 | 0.80 | 1.35 |
| 2029 | 1.47 | 1.47 | 1.47 | 1.47 | 0.58 | 1.03 | 1.11 | 1.32 | 1.47 | 1.20 | 1.42 | 1.47 | 1.29 |
| PROMEDIO | 1.42 | 1.46 | 1.47 | 1.47 | 1.31 | 1.23 | 1.37 | 1.38 | 1.45 | 1.35 | 1.27 | 1.31 | 1.37 |
| MÁXIMO | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 | 1.47 |
| MÍNIMO | 0.78 | 0.91 | 1.47 | 1.29 | 0.49 | 0.64 | 0.94 | 1.08 | 1.22 | 0.91 | 0.70 | 0.24 | 1.11 |
| DESV.TÍPICA | 0.15 | 0.08 | 0.00 | 0.02 | 0.23 | 0.24 | 0.14 | 0.12 | 0.06 | 0.14 | 0.24 | 0.29 | 0.08 |

3. Volúmenes turbinados mensuales y anuales en la minicentral hidroeléctrica en m³

Tabla de volúmenes turbinados mensuales y anuales (m³)

| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1965 | 3,057,966 | 3,556,224 | 3,937,248 | 3,810,240 | 3,281,247 | 2,860,837 | 3,863,259 | 3,656,554 | 3,810,240 | 3,613,140 | 3,214,966 | 3,937,248 |
| 1966 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 2,651,354 | 3,810,240 | 3,787,946 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 |
| 1967 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,664,660 | 2,456,663 | 3,937,248 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,482,416 |
| 1968 | 3,937,248 | 2,877,373 | 3,937,248 | 3,810,240 | 2,007,768 | 2,297,644 | 2,719,867 | 3,252,601 | 3,578,296 | 2,805,234 | 3,022,818 | 2,481,998 |
| 1969 | 2,093,795 | 3,556,224 | 3,937,248 | 3,810,240 | 3,336,020 | 2,138,625 | 3,164,900 | 3,827,720 | 3,810,240 | 3,496,747 | 3,791,410 | 3,937,248 |
| 1970 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,523,417 | 3,937,248 | 3,937,248 | 3,810,240 | 3,937,248 | 3,632,391 | 3,937,248 |
| 1971 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,530,043 | 3,829,026 | 3,937,248 | 3,810,240 | 3,517,287 | 2,631,895 | 3,937,248 |
| 1972 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 | 3,937,248 | 3,810,240 | 3,928,086 | 2,638,521 | 3,937,248 |
| 1973 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 | 3,814,027 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 |
| 1974 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 2,623,968 | 3,810,240 | 3,937,248 | 3,937,248 | 3,810,240 | 3,937,248 | 2,983,063 | 3,409,922 |
| 1975 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,795,075 | 3,937,248 | 3,937,248 | 3,810,240 | 3,599,447 | 3,526,378 | 3,127,195 |
| 1976 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 2,938,914 | 3,430,656 | 3,876,953 | 3,937,248 | 3,810,240 | 3,236,574 | 2,353,612 | 3,937,248 |
| 1977 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 2,741,572 | 3,575,700 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 |
| 1978 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,096,387 | 2,834,334 | 3,151,207 | 3,731,867 | 3,810,240 | 3,937,248 | 2,804,166 | 3,937,248 |
| 1979 | 3,376,940 | 3,556,224 | 3,937,248 | 3,810,240 | 3,431,874 | 2,622,308 | 3,637,320 | 3,903,033 | 3,810,240 | 3,127,027 | 2,201,218 | 763,890 |
| 1980 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 2,904,681 | 2,973,475 | 3,226,520 | 2,965,041 | 3,810,240 | 3,524,133 | 3,810,240 | 3,937,248 |
| 1981 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,520,880 | 3,629,430 | 3,937,248 | 3,677,094 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 |
| 1982 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 2,655,437 | 3,678,400 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 |
| 1983 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,267,554 | 3,801,700 | 3,281,293 | 3,519,621 | 3,810,240 | 3,188,647 | 2,300,605 | 3,937,248 |
| 1984 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,856,413 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 |
| 1985 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 | 3,903,033 | 3,810,240 | 2,955,861 | 3,055,947 | 3,937,248 |
| 1986 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 | 3,937,248 | 3,810,240 | 3,756,920 | 3,122,205 | 3,937,248 |
| 1987 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 2,534,961 | 2,191,631 | 3,507,233 | 3,512,774 | 3,624,677 | 3,448,820 | 3,234,843 | 3,937,248 |
| 1988 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,761,946 | 3,733,173 | 3,327,914 | 3,697,561 | 3,407,740 | 1,995,819 | 2,329,761 |
| 1989 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 2,980,101 | 3,937,248 | 3,273,141 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 |
| 1990 | 3,937,248 | 3,556,224 | 3,937,248 | 3,347,974 | 1,323,102 | 3,675,810 | 2,774,640 | 3,273,141 | 3,810,240 | 3,750,073 | 3,810,240 | 3,937,248 |
| 1991 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,404,152 | 3,937,248 | 3,389,534 | 3,810,240 | 3,845,926 | 3,234,843 | 2,293,514 |
| 1992 | 3,937,248 | 2,196,397 | 3,937,248 | 3,810,240 | 2,343,255 | 1,919,973 | 2,897,880 | 3,279,987 | 3,273,510 | 3,715,840 | 2,108,457 | 1,532,326 |
| 1993 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 2,715,069 | 3,527,773 | 3,601,780 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 |
| 1994 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 | 3,937,248 | 3,810,240 | 3,544,673 | 3,810,240 | 3,937,248 |
| 1995 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,438,720 | 2,887,340 | 3,603,086 | 3,882,493 | 3,810,240 | 3,332,427 | 3,810,240 | 3,937,248 |
| 1996 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,185,501 | 3,562,006 | 3,937,248 | 3,810,240 | 3,414,587 | 3,413,740 | 2,953,210 |
| 1997 | 3,937,248 | 3,556,224 | 3,937,248 | 3,621,580 | 3,233,320 | 3,516,791 | 3,937,248 | 3,937,248 | 3,810,240 | 3,476,207 | 3,810,240 | 3,937,248 |
| 1998 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,514,034 | 2,781,327 | 3,774,253 | 3,642,860 | 3,810,240 | 3,661,067 | 3,221,592 | 2,366,008 |
| 1999 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,682,436 | 3,657,860 | 3,937,248 | 3,810,240 | 3,937,248 | 2,744,534 | 3,937,248 |
| 2000 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 |
| 2001 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 | 3,937,248 | 3,810,240 | 3,606,293 | 3,810,240 | 3,583,908 |
| 2002 | 3,456,683 | 3,556,224 | 3,937,248 | 3,810,240 | 3,870,060 | 2,695,192 | 3,897,493 | 3,937,248 | 3,810,240 | 3,674,760 | 3,810,240 | 3,937,248 |
| 2003 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 2,900,592 | 3,452,460 | 3,012,968 | 3,810,240 | 3,937,248 | 1,850,051 | 3,937,248 |
| 2004 | 2,304,028 | 3,556,224 | 3,937,248 | 3,810,240 | 2,945,761 | 2,092,244 | 3,937,248 | 3,067,741 | 3,386,148 | 3,359,814 | 3,810,240 | 3,937,248 |
| 2005 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,233,320 | 2,503,044 | 3,041,660 | 2,903,421 | 3,154,245 | 2,483,441 | 1,803,670 | 3,083,699 |
| 2006 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,172,249 | 3,767,406 | 3,937,248 | 3,810,240 | 3,517,287 | 3,605,888 | 3,937,248 |
| 2007 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,642,681 | 3,911,186 | 3,937,248 | 3,810,240 | 3,937,248 | 3,274,598 | 2,706,730 |
| 2008 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,116,927 | 2,271,141 | 3,541,466 | 3,656,554 | 3,253,632 | 2,442,361 | 2,373,489 | 3,105,447 |
| 2009 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,059,611 | 3,937,248 | 3,848,260 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 |
| 2010 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 | 3,937,248 | 3,810,240 | 3,216,034 | 3,810,240 | 3,937,248 |
| 2011 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 |
| 2012 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 2,748,198 | 3,603,086 | 3,177,288 | 3,724,064 | 3,414,587 | 3,002,940 | 3,937,248 |
| 2013 | 2,572,256 | 3,556,224 | 3,937,248 | 3,810,240 | 3,692,047 | 3,810,240 | 3,937,248 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 |
| 2014 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,842,719 | 3,677,094 | 3,810,240 | 3,346,120 | 2,479,502 | 3,937,248 |
| 2015 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 2,642,185 | 3,937,248 | 3,937,248 | 3,810,240 | 3,937,248 | 3,122,205 | 3,272,183 |
| 2016 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,669,184 | 3,937,248 | 3,937,248 | 3,810,240 | 3,530,980 | 2,380,115 | 2,177,523 |
| 2017 | 2,485,263 | 3,556,224 | 3,937,248 | 3,810,240 | 2,719,821 | 2,688,566 | 3,937,248 | 3,937,248 | 3,810,240 | 3,729,533 | 3,128,830 | 2,800,972 |
| 2018 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,164,854 | 2,191,631 | 2,795,180 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 |
| 2019 | 3,181,206 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 2,754,824 | 3,240,213 | 3,937,248 | 3,810,240 | 3,866,466 | 3,692,023 | 3,937,248 |
| 2020 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,390,794 | 3,496,914 | 3,937,248 | 3,382,687 | 3,810,240 | 3,305,040 | 3,810,240 | 3,937,248 |
| 2021 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 | 3,937,248 | 3,810,240 | 2,784,694 | 3,810,240 | 3,937,248 |
| 2022 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 |
| 2023 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,753,667 | 2,807,830 | 3,336,067 | 3,012,968 | 3,392,774 | 3,277,654 | 3,314,353 | 3,937,248 |
| 2024 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 2,398,028 | 1,654,941 | 2,528,161 | 3,252,601 | 3,810,240 | 3,585,753 | 1,856,677 | 655,149 |
| 2025 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,685,200 | 3,616,178 | 3,637,320 | 3,006,121 | 3,565,045 | 3,839,080 | 3,810,240 | 3,937,248 |
| 2026 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 | 3,759,254 | 3,810,240 | 3,937,248 | 3,102,327 | 3,475,167 |
| 2027 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,698,939 | 3,937,248 | 3,810,240 | 3,937,248 | 3,810,240 | 3,937,248 |
| 2028 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 3,514,034 | 2,860,837 | 3,514,080 | 3,622,320 | 3,810,240 | 3,937,248 | 3,810,240 | 2,141,276 |
| 2029 | 3,937,248 | 3,556,224 | 3,937,248 | 3,810,240 | 1,555,889 | 2,675,314 | 2,966,347 | 3,526,467 | 3,810,240 | 3,202,340 | 3,692,023 | 3,937,248 |

4. Energía mensual y anual generada en la minicentral en kWh

Tabla de energía generada en la minicentral (kWh)

| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1965 | 3,541,365 | 4,118,387 | 4,559,643 | 4,412,558 | 3,799,942 | 3,313,074 | 4,473,958 | 4,234,577 | 4,412,558 | 4,184,300 | 3,723,183 | 4,559,643 |
| 1966 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 3,070,477 | 4,412,558 | 4,386,740 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 |
| 1967 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,243,965 | 2,845,009 | 4,559,643 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,032,912 |
| 1968 | 4,559,643 | 3,332,224 | 4,559,643 | 4,412,558 | 2,325,154 | 2,660,852 | 3,149,820 | 3,766,768 | 4,143,949 | 3,248,682 | 3,500,661 | 2,874,349 |
| 1969 | 2,424,779 | 4,118,387 | 4,559,643 | 4,412,558 | 3,863,374 | 2,476,696 | 3,665,203 | 4,432,801 | 4,412,558 | 4,049,508 | 4,390,751 | 4,559,643 |
| 1970 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 4,080,394 | 4,559,643 | 4,559,643 | 4,412,558 | 4,559,643 | 4,206,595 | 4,559,643 |
| 1971 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 4,088,067 | 4,434,313 | 4,559,643 | 4,412,558 | 4,073,295 | 3,047,942 | 4,559,643 |
| 1972 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 3,174,957 | 4,140,941 | 4,559,643 | 4,559,643 | 4,412,558 | 4,549,033 | 3,055,615 |
| 1973 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 | 4,416,943 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 |
| 1974 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 3,038,761 | 4,412,558 | 4,559,643 | 4,559,643 | 4,412,558 | 4,559,643 | 3,454,621 | 3,948,958 |
| 1975 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 4,394,995 | 4,559,643 | 4,559,643 | 4,412,558 | 4,168,443 | 4,083,824 | 3,621,538 |
| 1976 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 3,403,494 | 3,972,969 | 4,489,816 | 4,559,643 | 4,412,558 | 3,748,207 | 2,725,668 | 4,559,643 |
| 1977 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 3,174,957 | 4,140,941 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 |
| 1978 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 3,585,860 | 3,282,381 | 3,649,345 | 4,321,796 | 4,412,558 | 4,559,643 | 3,247,445 | 4,559,643 |
| 1979 | 3,910,762 | 4,118,387 | 4,559,643 | 4,412,558 | 3,974,380 | 3,036,839 | 4,212,302 | 4,520,020 | 4,412,558 | 3,621,344 | 2,549,184 | 884,644 |
| 1980 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 3,363,849 | 3,443,519 | 3,736,564 | 3,433,751 | 4,412,558 | 4,081,224 | 4,412,558 | 4,559,643 |
| 1981 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,077,456 | 4,203,165 | 4,559,643 | 4,258,364 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 |
| 1982 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 3,075,205 | 4,259,876 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 |
| 1983 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 3,784,084 | 4,402,668 | 3,799,996 | 4,075,997 | 4,412,558 | 3,692,704 | 2,664,282 | 4,559,643 |
| 1984 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,466,029 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 |
| 1985 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 | 4,520,020 | 4,412,558 | 3,423,119 | 3,539,027 | 4,559,643 |
| 1986 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 | 4,559,643 | 4,412,558 | 4,350,809 | 3,615,759 | 4,559,643 |
| 1987 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 2,935,685 | 2,538,081 | 4,061,652 | 4,068,068 | 4,197,661 | 3,994,005 | 3,746,203 | 4,559,643 |
| 1988 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 4,356,629 | 4,323,308 | 3,853,986 | 4,282,066 | 3,946,431 | 2,311,315 | 2,698,046 |
| 1989 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 3,451,192 | 4,559,643 | 3,790,555 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 |
| 1990 | 4,559,643 | 4,118,387 | 4,559,643 | 3,877,217 | 1,532,257 | 4,256,877 | 3,213,252 | 3,790,555 | 4,412,558 | 4,342,880 | 4,412,558 | 4,559,643 |
| 1991 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 3,942,276 | 4,559,643 | 3,925,347 | 4,412,558 | 4,453,885 | 3,746,203 | 2,656,070 |
| 1992 | 4,559,643 | 2,543,600 | 4,559,643 | 4,412,558 | 2,713,673 | 2,223,480 | 3,355,973 | 3,798,484 | 3,790,982 | 4,303,235 | 2,441,759 | 1,774,555 |
| 1993 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 3,144,264 | 4,085,439 | 4,171,145 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 |
| 1994 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 | 4,559,643 | 4,412,558 | 4,105,011 | 4,412,558 | 4,559,643 |
| 1995 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 3,982,309 | 3,343,767 | 4,172,657 | 4,496,233 | 4,412,558 | 3,859,213 | 4,412,558 | 4,559,643 |
| 1996 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 3,689,061 | 4,125,084 | 4,559,643 | 4,412,558 | 3,954,360 | 3,953,379 | 3,420,049 |
| 1997 | 4,559,643 | 4,118,387 | 4,559,643 | 4,194,075 | 3,744,439 | 4,072,721 | 4,559,643 | 4,559,643 | 4,412,558 | 4,025,721 | 4,412,558 | 4,559,643 |
| 1998 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,069,527 | 3,220,996 | 4,370,882 | 4,218,719 | 4,412,558 | 4,239,803 | 3,730,856 | 2,740,023 |
| 1999 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 4,264,551 | 4,236,089 | 4,559,643 | 4,412,558 | 4,559,643 | 3,178,386 | 4,559,643 |
| 2000 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 |
| 2001 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 | 4,559,643 | 4,412,558 | 4,176,371 | 4,412,558 | 4,150,447 |
| 2002 | 4,003,111 | 4,118,387 | 4,559,643 | 4,412,558 | 4,481,834 | 3,121,244 | 4,513,603 | 4,559,643 | 4,412,558 | 4,255,661 | 4,412,558 | 4,559,643 |
| 2003 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 3,359,113 | 3,998,220 | 3,489,254 | 4,412,558 | 4,559,643 | 2,142,505 | 4,559,643 |
| 2004 | 2,668,245 | 4,118,387 | 4,559,643 | 4,412,558 | 3,411,423 | 2,422,983 | 4,559,643 | 3,552,685 | 3,921,426 | 3,890,929 | 4,412,558 | 4,559,643 |
| 2005 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 3,744,439 | 2,898,722 | 3,522,482 | 3,362,390 | 3,652,864 | 2,876,020 | 2,088,792 | 3,571,166 |
| 2006 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 3,673,714 | 4,362,953 | 4,559,643 | 4,412,558 | 4,073,295 | 4,175,902 | 4,559,643 |
| 2007 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 4,218,511 | 4,529,461 | 4,559,643 | 4,412,558 | 4,559,643 | 3,792,242 | 3,134,606 |
| 2008 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 3,609,647 | 2,630,160 | 4,101,297 | 4,234,577 | 3,767,962 | 2,828,447 | 2,748,687 | 3,596,352 |
| 2009 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 3,543,270 | 4,559,643 | 4,456,588 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 |
| 2010 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 | 4,559,643 | 4,412,558 | 3,724,420 | 4,412,558 | 4,559,643 |
| 2011 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 |
| 2012 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 3,182,630 | 4,172,657 | 3,679,549 | 4,312,759 | 3,954,360 | 3,477,641 | 4,559,643 |
| 2013 | 2,978,874 | 4,118,387 | 4,559,643 | 4,412,558 | 4,275,681 | 4,412,558 | 4,559,643 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 |
| 2014 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,450,171 | 4,258,364 | 4,412,558 | 3,875,071 | 2,871,458 | 4,559,643 |
| 2015 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 3,059,859 | 4,559,643 | 4,559,643 | 4,412,558 | 4,559,643 | 3,615,759 | 3,789,446 |
| 2016 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 4,249,204 | 4,559,643 | 4,559,643 | 4,412,558 | 4,089,153 | 2,756,360 | 2,521,743 |
| 2017 | 2,878,130 | 4,118,387 | 4,559,643 | 4,412,558 | 3,149,767 | 3,113,571 | 4,559,643 | 4,559,643 | 4,412,558 | 4,319,093 | 3,623,432 | 3,243,746 |
| 2018 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 3,665,150 | 2,538,081 | 3,237,039 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 |
| 2019 | 3,684,086 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 3,190,303 | 3,752,422 | 4,559,643 | 4,412,558 | 4,477,672 | 4,275,653 | 4,559,643 |
| 2020 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 3,926,806 | 4,049,701 | 4,559,643 | 3,917,418 | 4,412,558 | 3,827,497 | 4,412,558 | 4,559,643 |
| 2021 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 | 4,559,643 | 4,412,558 | 3,224,895 | 4,412,558 | 4,559,643 |
| 2022 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 |
| 2023 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,347,041 | 3,251,689 | 3,863,428 | 3,489,254 | 3,929,099 | 3,795,781 | 3,838,281 | 4,559,643 |
| 2024 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 2,777,105 | 1,916,552 | 2,927,809 | 3,766,768 | 4,412,558 | 4,152,585 | 2,150,178 | 758,714 |
| 2025 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,267,752 | 4,187,819 | 4,212,302 | 3,481,325 | 4,128,602 | 4,445,956 | 4,412,558 | 4,559,643 |
| 2026 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 | 4,353,511 | 4,412,558 | 4,559,643 | 3,592,739 | 4,024,517 |
| 2027 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,283,663 | 4,559,643 | 4,412,558 | 4,559,643 | 4,412,558 | 4,559,643 |
| 2028 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 4,069,527 | 3,313,074 | 4,069,581 | 4,194,932 | 4,412,558 | 4,559,643 | 4,412,558 | 2,479,767 |
| 2029 | 4,559,643 | 4,118,387 | 4,559,643 | 4,412,558 | 1,801,842 | 3,098,225 | 3,435,263 | 4,083,926 | 4,412,558 | 3,708,562 | 4,275,653 | 4,559,643 |

5. Ingresos anuales del proyecto

Tabla de ingresos del proyecto (s/.)

| AÑO | ENERGÍA (GWh) | INGRESOS (s/.) | TOTAL |
|------|---------------|----------------|--------------|
| 2015 | - | - | - |
| 2016 | - | - | - |
| 2017 | - | - | - |
| 2018 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2019 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2020 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2021 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2022 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2023 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2024 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2025 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2026 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2027 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2028 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2029 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2030 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2031 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2032 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2033 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2034 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2035 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2036 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2037 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2038 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2039 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2040 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2041 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2042 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2043 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2044 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2045 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2046 | 50.14 | 9,243,825.65 | 9,243,825.65 |
| 2047 | 50.14 | 9,243,825.65 | 9,243,825.65 |

6. Egresos anuales del proyecto

Tabla de egresos del proyecto (s/.)

| AÑO | INVERSIÓN | PERSONAL | REPUESTOS Y CONSUMIBLES | OTROS COSTOS INDIRECTOS | OSINERGMIN DGE COES | CANON DE AGUA | TOTAL EGRESOS |
|------|------------|----------|----------------------------|----------------------------|------------------------|------------------|------------------|
| 2015 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2016 | 12,942,682 | 0 | 0 | 0 | 0 | 0 | 12,942,682 |
| 2017 | 30,199,592 | 0 | 0 | 0 | 0 | 0 | 30,199,592 |
| 2018 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2019 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2020 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2021 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2022 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2023 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2024 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2025 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2026 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2027 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2028 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2029 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2030 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2031 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2032 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2033 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2034 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2035 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2036 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2037 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2038 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2039 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2040 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2041 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2042 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2043 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2044 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2045 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2046 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |
| 2047 | 0 | 42,902 | 39,120 | 595,947 | 92,438 | 92,438 | 862,845 |

Para los egresos anuales del proyecto, se contempló gastos personal fijo, repuesto y combustible, pago al COES, Osinergmin y DGE (1% del ingreso anual) y Canon de agua (1% del ingreso por energía anual) según lo indica la LCE (Ley de Concesiones Eléctricas). Los valores de personal fijo, repuestos y combustibles fueron obtenidos de proyectos similares de minicentrales hidroeléctricas realizados por empresas peruanas.

7. Flujo económico

Tabla de flujo económico

| AÑO | TOTAL | TOTAL | FLUJO |
|------|-----------|------------|-------------|
| | INGRESOS | EGRESOS | ECONÓMICO |
| 2017 | 0 | 12,942,682 | -12,942,682 |
| 2018 | 0 | 30,199,592 | -30,199,592 |
| 2019 | 9,243,826 | 862,845 | 8,380,980 |
| 2020 | 9,243,826 | 862,845 | 8,380,980 |
| 2021 | 9,243,826 | 862,845 | 8,380,980 |
| 2022 | 9,243,826 | 862,845 | 8,380,980 |
| 2023 | 9,243,826 | 862,845 | 8,380,980 |
| 2024 | 9,243,826 | 862,845 | 8,380,980 |
| 2025 | 9,243,826 | 862,845 | 8,380,980 |
| 2026 | 9,243,826 | 862,845 | 8,380,980 |
| 2027 | 9,243,826 | 862,845 | 8,380,980 |
| 2028 | 9,243,826 | 862,845 | 8,380,980 |
| 2029 | 9,243,826 | 862,845 | 8,380,980 |
| 2030 | 9,243,826 | 862,845 | 8,380,980 |
| 2031 | 9,243,826 | 862,845 | 8,380,980 |
| 2032 | 9,243,826 | 862,845 | 8,380,980 |
| 2033 | 9,243,826 | 862,845 | 8,380,980 |
| 2034 | 9,243,826 | 862,845 | 8,380,980 |
| 2035 | 9,243,826 | 862,845 | 8,380,980 |
| 2036 | 9,243,826 | 862,845 | 8,380,980 |
| 2037 | 9,243,826 | 862,845 | 8,380,980 |
| 2038 | 9,243,826 | 862,845 | 8,380,980 |
| 2039 | 9,243,826 | 862,845 | 8,380,980 |
| 2040 | 9,243,826 | 862,845 | 8,380,980 |
| 2041 | 9,243,826 | 862,845 | 8,380,980 |
| 2042 | 9,243,826 | 862,845 | 8,380,980 |
| 2043 | 9,243,826 | 862,845 | 8,380,980 |
| 2044 | 9,243,826 | 862,845 | 8,380,980 |
| 2045 | 9,243,826 | 862,845 | 8,380,980 |
| 2046 | 9,243,826 | 862,845 | 8,380,980 |
| 2047 | 9,243,826 | 862,845 | 8,380,980 |
| 2048 | 9,243,826 | 862,845 | 8,380,980 |

El flujo económico es igual al total de ingresos menos el total de egresos

8. Indicadores económicos

Tabla de indicadores económicos para diferentes tasas

| ANÁLISIS ECONÓMICO | | | | |
|--------------------|----------------|----------------|----------------|--------------|
| TASA | VANB (US\$) | VANC (US\$) | VANE (US\$) | B/C (ECO) |
| 9% | 79,932,553.46 | 44,753,549.70 | 35,179,003.76 | 1.79 |
| 10% | 72,017,151.86 | 43,446,705.61 | 28,570,446.25 | 1.66 |
| 11% | 65,225,146.33 | 42,259,045.28 | 22,966,101.04 | 1.54 |
| 12% | 59,359,627.06 | 41,171,696.40 | 18,187,930.66 | 1.44 |
| 13% | 54,263,069.57 | 40,169,484.21 | 14,093,585.36 | 1.35 |
| 14% | 49,808,715.10 | 39,240,125.88 | 10,568,589.22 | 1.27 |
| 15% | 45,893,966.72 | 38,373,612.99 | 7,520,353.73 | 1.20 |
| 16% | 42,435,304.64 | 37,561,735.99 | 4,873,568.65 | 1.13 |
| 17% | 39,364,351.87 | 36,797,716.01 | 2,566,635.86 | 1.07 |
| 18% | 36,624,814.97 | 36,075,918.46 | 548,896.50 | 1.02 |
| 19% | 34,170,093.46 | 35,391,629.07 | (1,221,535.61) | 0.97 |
| 20% | 31,961,402.77 | 34,740,877.91 | (2,779,475.14) | 0.92 |
| 21% | 29,966,293.05 | 34,120,300.44 | (4,154,007.39) | 0.88 |
| 22% | 28,157,474.81 | 33,527,027.18 | (5,369,552.37) | 0.84 |
| | | | | |
| | TIR | 18.30% | | |
| | | | | |

Evaluación financiera para el $Q=1.47m^3/s$

Tabla de flujo financiero (s/.)

| CUOTA | INTERÉS | AMORTIZACIÓN | SALDO | FLUJO FINANCIERO |
|-----------|-----------|--------------|------------|------------------|
| 0 | 0 | 0 | 0 | -12,942,682 |
| 0 | 0 | 0 | 0 | -17,256,910 |
| 1,606,752 | 1,553,122 | 53,630 | 12,889,052 | 6,774,228 |
| 1,606,752 | 1,546,686 | 60,066 | 12,828,987 | 6,774,228 |
| 1,606,752 | 1,539,478 | 67,274 | 12,761,713 | 6,774,228 |
| 1,606,752 | 1,531,406 | 75,346 | 12,686,367 | 6,774,228 |
| 1,606,752 | 1,522,364 | 84,388 | 12,601,979 | 6,774,228 |
| 1,606,752 | 1,512,237 | 94,514 | 12,507,465 | 6,774,228 |
| 1,606,752 | 1,500,896 | 105,856 | 12,401,608 | 6,774,228 |
| 1,606,752 | 1,488,193 | 118,559 | 12,283,049 | 6,774,228 |
| 1,606,752 | 1,473,966 | 132,786 | 12,150,263 | 6,774,228 |
| 1,606,752 | 1,458,032 | 148,720 | 12,001,543 | 6,774,228 |
| 1,606,752 | 1,440,185 | 166,567 | 11,834,976 | 6,774,228 |
| 1,606,752 | 1,420,197 | 186,555 | 11,648,421 | 6,774,228 |
| 1,606,752 | 1,397,811 | 208,941 | 11,439,480 | 6,774,228 |
| 1,606,752 | 1,372,738 | 234,014 | 11,205,466 | 6,774,228 |
| 1,606,752 | 1,344,656 | 262,096 | 10,943,370 | 6,774,228 |
| 1,606,752 | 1,313,204 | 293,548 | 10,649,822 | 6,774,228 |
| 1,606,752 | 1,277,979 | 328,773 | 10,321,049 | 6,774,228 |
| 1,606,752 | 1,238,526 | 368,226 | 9,952,823 | 6,774,228 |
| 1,606,752 | 1,194,339 | 412,413 | 9,540,410 | 6,774,228 |
| 1,606,752 | 1,144,849 | 461,903 | 9,078,507 | 6,774,228 |
| 1,606,752 | 1,089,421 | 517,331 | 8,561,176 | 6,774,228 |
| 1,606,752 | 1,027,341 | 579,411 | 7,981,765 | 6,774,228 |
| 1,606,752 | 957,812 | 648,940 | 7,332,825 | 6,774,228 |
| 1,606,752 | 879,939 | 726,813 | 6,606,012 | 6,774,228 |
| 1,606,752 | 792,721 | 814,031 | 5,791,981 | 6,774,228 |
| 1,606,752 | 695,038 | 911,714 | 4,880,267 | 6,774,228 |
| 1,606,752 | 585,632 | 1,021,120 | 3,859,147 | 6,774,228 |
| 1,606,752 | 463,098 | 1,143,654 | 2,715,493 | 6,774,228 |
| 1,606,752 | 325,859 | 1,280,893 | 1,434,600 | 6,774,228 |
| 1,606,752 | 172,152 | 1,434,600 | -0 | 6,774,228 |

Tabla de indicadores financieros para diferentes tasas

| ANÁLISIS FINANCIERO | | | |
|---------------------|---------------------|------------------------------|--------------|
| VANF (US\$) | VANC(fin) (US\$) | VANC (fin+egresos) (US\$) | B/C (FIN) |
| 32,178,809.25 | 13,893,791.39 | 47,753,744.21 | 1.67 |
| 26,748,933.32 | 12,517,944.71 | 45,268,218.54 | 1.59 |
| 22,133,306.94 | 11,337,365.53 | 43,091,839.39 | 1.51 |
| 18,187,930.66 | 10,317,827.21 | 41,171,696.40 | 1.44 |
| 14,797,655.18 | 9,431,949.01 | 39,465,414.38 | 1.37 |
| 11,869,865.24 | 8,657,697.86 | 37,938,849.86 | 1.31 |
| 9,329,640.64 | 7,977,240.46 | 36,564,326.08 | 1.26 |
| 7,116,030.59 | 7,376,059.50 | 35,319,274.05 | 1.20 |
| 5,179,171.02 | 6,842,269.76 | 34,185,180.85 | 1.15 |
| 3,478,043.16 | 6,366,086.37 | 33,146,771.81 | 1.10 |
| 1,978,722.12 | 5,939,409.29 | 32,191,371.34 | 1.06 |
| 653,001.77 | 5,555,497.02 | 31,308,401.01 | 1.02 |
| (522,690.29) | 5,208,709.17 | 30,488,983.35 | 0.98 |
| (1,568,152.95) | 4,894,302.31 | 29,725,627.76 | 0.95 |
| | TIR | 20.54% | |

Evaluación económica para el $Q=1.44\text{m}^3/\text{s}$

1. Descargas medias mensuales y anuales para el caudal de captación $1.44\text{ m}^3/\text{s}$ captadas en la bocatoma

Tabla de descargas medias generadas mensuales y anuales en la bocatoma (m^3/s)

| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1965 | 1.14 | 4.10 | 3.81 | 1.67 | 1.23 | 1.10 | 1.44 | 1.37 | 1.59 | 1.35 | 1.24 | 1.51 |
| 1966 | 4.01 | 3.19 | 3.71 | 2.43 | 0.99 | 1.53 | 1.41 | 1.48 | 1.70 | 1.81 | 1.63 | 1.76 |
| 1967 | 1.49 | 7.76 | 7.21 | 2.42 | 1.37 | 0.95 | 1.63 | 1.92 | 2.17 | 2.31 | 1.78 | 1.30 |
| 1968 | 1.55 | 1.19 | 2.46 | 1.80 | 0.75 | 0.89 | 1.02 | 1.21 | 1.38 | 1.05 | 1.17 | 0.93 |
| 1969 | 0.78 | 2.36 | 3.14 | 3.13 | 1.25 | 0.83 | 1.18 | 1.43 | 1.62 | 1.31 | 1.46 | 4.15 |
| 1970 | 6.02 | 3.09 | 3.20 | 2.97 | 2.00 | 1.36 | 1.53 | 1.54 | 2.10 | 1.99 | 1.40 | 2.72 |
| 1971 | 3.67 | 4.90 | 7.02 | 3.94 | 1.79 | 1.36 | 1.43 | 1.66 | 1.83 | 1.31 | 1.02 | 1.83 |
| 1972 | 4.83 | 4.12 | 8.48 | 5.07 | 1.90 | 1.60 | 1.64 | 1.50 | 1.68 | 1.47 | 1.02 | 2.41 |
| 1973 | 5.27 | 7.28 | 7.00 | 5.56 | 2.04 | 1.54 | 1.66 | 1.42 | 2.02 | 1.83 | 1.90 | 3.40 |
| 1974 | 3.95 | 4.49 | 5.59 | 2.69 | 0.98 | 1.52 | 1.57 | 1.67 | 1.79 | 1.69 | 1.15 | 1.27 |
| 1975 | 2.27 | 2.46 | 6.61 | 2.86 | 1.74 | 1.46 | 1.48 | 1.58 | 2.24 | 1.34 | 1.36 | 1.17 |
| 1976 | 2.74 | 4.80 | 4.44 | 2.56 | 1.10 | 1.32 | 1.45 | 1.56 | 1.72 | 1.21 | 0.91 | 1.77 |
| 1977 | 1.65 | 6.12 | 3.89 | 2.34 | 1.64 | 1.06 | 1.34 | 1.47 | 1.67 | 1.56 | 2.19 | 1.91 |
| 1978 | 2.11 | 4.77 | 2.88 | 1.82 | 1.16 | 1.09 | 1.18 | 1.39 | 1.49 | 1.56 | 1.08 | 1.65 |
| 1979 | 1.26 | 4.64 | 6.15 | 3.04 | 1.28 | 1.01 | 1.36 | 1.46 | 2.20 | 1.17 | 0.85 | 0.29 |
| 1980 | 2.27 | 2.00 | 3.73 | 2.57 | 1.08 | 1.15 | 1.20 | 1.11 | 1.88 | 1.32 | 1.96 | 2.01 |
| 1981 | 2.70 | 7.45 | 6.07 | 2.68 | 1.31 | 1.40 | 1.62 | 1.37 | 1.61 | 1.79 | 1.90 | 2.52 |
| 1982 | 2.29 | 7.79 | 3.39 | 1.80 | 1.48 | 1.02 | 1.37 | 2.09 | 1.59 | 1.68 | 2.09 | 1.56 |
| 1983 | 2.39 | 1.48 | 3.77 | 3.75 | 1.22 | 1.47 | 1.23 | 1.31 | 1.62 | 1.19 | 0.89 | 1.79 |
| 1984 | 2.52 | 8.75 | 6.87 | 4.19 | 2.02 | 1.62 | 1.44 | 1.50 | 1.86 | 1.91 | 1.60 | 3.45 |
| 1985 | 2.06 | 3.63 | 5.04 | 3.95 | 1.78 | 1.60 | 1.73 | 1.46 | 1.74 | 1.10 | 1.18 | 2.24 |
| 1986 | 4.60 | 5.11 | 6.85 | 5.15 | 2.35 | 1.83 | 1.68 | 1.53 | 1.78 | 1.40 | 1.20 | 1.71 |
| 1987 | 4.75 | 4.86 | 3.17 | 1.67 | 0.95 | 0.85 | 1.31 | 1.31 | 1.40 | 1.29 | 1.25 | 2.30 |
| 1988 | 3.87 | 5.54 | 3.43 | 4.01 | 1.73 | 1.45 | 1.39 | 1.24 | 1.43 | 1.27 | 0.77 | 0.87 |
| 1989 | 4.13 | 6.43 | 6.05 | 4.11 | 1.80 | 1.15 | 1.49 | 1.22 | 1.57 | 1.59 | 1.56 | 1.88 |
| 1990 | 2.64 | 1.58 | 1.88 | 1.29 | 0.49 | 1.42 | 1.04 | 1.22 | 1.56 | 1.40 | 2.86 | 2.34 |
| 1991 | 2.09 | 2.64 | 5.23 | 2.42 | 1.80 | 1.31 | 1.53 | 1.27 | 1.54 | 1.44 | 1.25 | 0.86 |
| 1992 | 1.56 | 0.91 | 2.48 | 1.77 | 0.87 | 0.74 | 1.08 | 1.22 | 1.26 | 1.39 | 0.81 | 0.57 |
| 1993 | 2.13 | 4.18 | 5.11 | 3.48 | 1.85 | 1.05 | 1.32 | 1.34 | 1.65 | 1.65 | 2.95 | 4.17 |
| 1994 | 4.88 | 5.44 | 5.37 | 5.33 | 2.63 | 2.00 | 1.66 | 1.55 | 1.90 | 1.32 | 1.58 | 1.70 |
| 1995 | 2.64 | 2.30 | 3.77 | 3.54 | 1.28 | 1.11 | 1.35 | 1.45 | 1.62 | 1.24 | 1.62 | 2.10 |
| 1996 | 3.72 | 5.75 | 5.17 | 3.71 | 1.60 | 1.23 | 1.33 | 1.57 | 1.67 | 1.27 | 1.32 | 1.10 |
| 1997 | 2.25 | 4.51 | 2.97 | 1.40 | 1.21 | 1.36 | 1.70 | 1.73 | 1.96 | 1.30 | 1.68 | 2.71 |
| 1998 | 4.95 | 5.20 | 4.88 | 2.78 | 1.31 | 1.07 | 1.41 | 1.36 | 1.58 | 1.37 | 1.24 | 0.88 |
| 1999 | 1.58 | 4.98 | 4.84 | 3.78 | 2.29 | 1.42 | 1.37 | 1.60 | 1.82 | 1.50 | 1.06 | 2.72 |
| 2000 | 4.43 | 6.03 | 5.55 | 2.80 | 2.29 | 1.50 | 1.79 | 1.55 | 1.82 | 2.12 | 1.59 | 2.68 |
| 2001 | 6.22 | 5.23 | 5.84 | 3.83 | 2.36 | 1.62 | 1.73 | 1.79 | 2.16 | 1.35 | 1.77 | 1.34 |
| 2002 | 1.29 | 3.39 | 5.31 | 3.38 | 1.44 | 1.04 | 1.46 | 1.63 | 1.80 | 1.37 | 1.93 | 2.44 |
| 2003 | 4.06 | 4.55 | 5.38 | 3.57 | 1.47 | 1.12 | 1.29 | 1.12 | 1.48 | 1.54 | 0.71 | 1.77 |
| 2004 | 0.86 | 3.58 | 3.23 | 2.71 | 1.10 | 0.81 | 1.51 | 1.15 | 1.31 | 1.25 | 2.13 | 3.12 |
| 2005 | 3.88 | 3.74 | 4.92 | 3.90 | 1.21 | 0.97 | 1.14 | 1.08 | 1.22 | 0.93 | 0.70 | 1.15 |
| 2006 | 2.83 | 4.19 | 5.68 | 4.63 | 1.53 | 1.22 | 1.41 | 1.54 | 1.56 | 1.31 | 1.39 | 2.37 |
| 2007 | 4.56 | 4.81 | 5.82 | 4.31 | 1.84 | 1.41 | 1.46 | 1.60 | 1.97 | 1.60 | 1.26 | 1.01 |
| 2008 | 4.33 | 5.60 | 4.58 | 2.74 | 1.16 | 0.88 | 1.32 | 1.37 | 1.26 | 0.91 | 0.92 | 1.16 |
| 2009 | 3.49 | 6.71 | 5.79 | 3.45 | 1.57 | 1.18 | 1.50 | 1.44 | 1.63 | 1.78 | 3.07 | 4.49 |
| 2010 | 7.15 | 4.29 | 4.65 | 4.01 | 1.71 | 1.91 | 1.84 | 1.58 | 1.60 | 1.20 | 1.54 | 2.75 |
| 2011 | 3.64 | 6.61 | 8.03 | 6.12 | 2.42 | 1.60 | 1.65 | 1.56 | 1.99 | 2.01 | 1.78 | 1.47 |
| 2012 | 3.37 | 6.49 | 5.47 | 4.49 | 1.73 | 1.06 | 1.35 | 1.19 | 1.44 | 1.27 | 1.16 | 2.51 |
| 2013 | 0.96 | 6.77 | 6.79 | 2.88 | 1.38 | 1.53 | 1.67 | 1.78 | 2.07 | 1.93 | 1.69 | 2.83 |
| 2014 | 3.51 | 3.79 | 5.41 | 3.18 | 1.71 | 1.75 | 1.43 | 1.37 | 1.76 | 1.25 | 0.96 | 1.68 |
| 2015 | 3.94 | 4.51 | 5.27 | 3.47 | 1.91 | 1.02 | 1.64 | 1.48 | 1.52 | 1.59 | 1.20 | 1.22 |
| 2016 | 2.38 | 1.58 | 3.76 | 2.66 | 1.73 | 1.42 | 1.87 | 1.51 | 1.87 | 1.32 | 0.92 | 0.81 |
| 2017 | 0.93 | 2.46 | 4.14 | 1.91 | 1.02 | 1.04 | 1.55 | 1.73 | 2.04 | 1.39 | 1.21 | 1.05 |
| 2018 | 3.13 | 4.54 | 3.12 | 2.52 | 1.18 | 0.85 | 1.04 | 1.59 | 2.09 | 1.86 | 1.54 | 3.61 |
| 2019 | 1.19 | 4.59 | 3.29 | 2.26 | 1.59 | 1.06 | 1.21 | 1.49 | 1.50 | 1.44 | 1.42 | 2.14 |
| 2020 | 1.66 | 4.93 | 3.01 | 2.91 | 1.27 | 1.35 | 1.50 | 1.26 | 1.80 | 1.23 | 1.66 | 3.13 |
| 2021 | 2.84 | 3.70 | 4.55 | 4.62 | 2.30 | 1.76 | 1.85 | 1.47 | 1.62 | 1.04 | 1.52 | 2.78 |
| 2022 | 2.37 | 4.13 | 2.91 | 3.57 | 2.01 | 2.08 | 1.86 | 2.02 | 2.50 | 2.23 | 3.39 | 4.22 |
| 2023 | 6.12 | 2.07 | 4.39 | 2.41 | 1.40 | 1.08 | 1.25 | 1.12 | 1.31 | 1.22 | 1.28 | 2.14 |
| 2024 | 2.99 | 4.99 | 5.78 | 2.39 | 0.90 | 0.64 | 0.94 | 1.21 | 1.68 | 1.34 | 0.72 | 0.24 |
| 2025 | 2.35 | 5.41 | 4.02 | 1.85 | 1.38 | 1.40 | 1.36 | 1.12 | 1.38 | 1.43 | 1.70 | 1.51 |
| 2026 | 4.17 | 5.80 | 5.50 | 3.06 | 1.88 | 1.51 | 1.53 | 1.40 | 1.82 | 1.70 | 1.20 | 1.30 |
| 2027 | 2.60 | 5.61 | 9.23 | 5.03 | 2.35 | 1.47 | 1.38 | 1.64 | 1.66 | 2.02 | 2.33 | 1.86 |
| 2028 | 1.52 | 2.90 | 3.91 | 2.23 | 1.31 | 1.10 | 1.31 | 1.35 | 1.70 | 1.55 | 1.48 | 0.80 |
| 2029 | 1.95 | 1.59 | 2.21 | 1.67 | 0.58 | 1.03 | 1.11 | 1.32 | 1.64 | 1.20 | 1.42 | 3.31 |

2. Volúmenes turbinados mensuales y anuales en la minicentral hidroeléctrica en m³

Tabla de volúmenes turbinados mensuales y anuales (m³)

| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1965 | 3,057,966 | 3,483,648 | 3,856,896 | 3,732,480 | 3,281,247 | 2,860,837 | 3,856,896 | 3,656,554 | 3,732,480 | 3,613,140 | 3,214,966 | 3,856,896 |
| 1966 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 2,651,354 | 3,732,480 | 3,787,946 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 |
| 1967 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,664,660 | 2,456,663 | 3,856,896 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,482,416 |
| 1968 | 3,856,896 | 2,877,373 | 3,856,896 | 3,732,480 | 2,007,768 | 2,297,644 | 2,719,867 | 3,252,601 | 3,578,296 | 2,805,234 | 3,022,818 | 2,481,998 |
| 1969 | 2,093,795 | 3,483,648 | 3,856,896 | 3,732,480 | 3,336,020 | 2,138,625 | 3,164,900 | 3,827,720 | 3,732,480 | 3,496,747 | 3,732,480 | 3,856,896 |
| 1970 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,523,417 | 3,856,896 | 3,856,896 | 3,732,480 | 3,856,896 | 3,632,391 | 3,856,896 |
| 1971 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,530,043 | 3,829,026 | 3,856,896 | 3,732,480 | 3,517,287 | 2,631,895 | 3,856,896 |
| 1972 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 | 3,856,896 | 3,732,480 | 3,856,896 | 2,638,521 | 3,856,896 |
| 1973 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 | 3,814,027 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 |
| 1974 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 2,623,968 | 3,732,480 | 3,856,896 | 3,856,896 | 3,732,480 | 3,856,896 | 2,983,063 | 3,409,922 |
| 1975 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 | 3,856,896 | 3,732,480 | 3,599,447 | 3,526,378 | 3,127,195 |
| 1976 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 2,938,914 | 3,430,656 | 3,856,896 | 3,856,896 | 3,732,480 | 3,236,574 | 2,353,612 | 3,856,896 |
| 1977 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 2,741,572 | 3,575,700 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 |
| 1978 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,096,387 | 2,834,334 | 3,151,207 | 3,731,867 | 3,732,480 | 3,856,896 | 2,804,166 | 3,856,896 |
| 1979 | 3,376,940 | 3,483,648 | 3,856,896 | 3,732,480 | 3,431,874 | 2,622,308 | 3,637,320 | 3,856,896 | 3,732,480 | 3,127,027 | 2,201,218 | 763,890 |
| 1980 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 2,904,681 | 2,973,475 | 3,226,520 | 2,965,041 | 3,732,480 | 3,524,133 | 3,732,480 | 3,856,896 |
| 1981 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,520,880 | 3,629,430 | 3,856,896 | 3,677,094 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 |
| 1982 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 2,655,437 | 3,678,400 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 |
| 1983 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,267,554 | 3,732,480 | 3,281,293 | 3,519,621 | 3,732,480 | 3,188,647 | 2,300,605 | 3,856,896 |
| 1984 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,413 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 |
| 1985 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 | 3,856,896 | 3,732,480 | 2,955,861 | 3,055,947 | 3,856,896 |
| 1986 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 | 3,856,896 | 3,732,480 | 3,756,920 | 3,122,205 | 3,856,896 |
| 1987 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 2,534,961 | 2,191,631 | 3,507,233 | 3,512,774 | 3,624,677 | 3,448,820 | 3,234,843 | 3,856,896 |
| 1988 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,733,173 | 3,327,914 | 3,697,561 | 3,407,740 | 1,995,819 | 2,329,761 |
| 1989 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 2,980,101 | 3,856,896 | 3,273,141 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 |
| 1990 | 3,856,896 | 3,483,648 | 3,856,896 | 3,347,974 | 1,323,102 | 3,675,810 | 2,774,640 | 3,273,141 | 3,732,480 | 3,750,073 | 3,732,480 | 3,856,896 |
| 1991 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,404,152 | 3,856,896 | 3,389,534 | 3,732,480 | 3,854,926 | 3,234,843 | 2,293,514 |
| 1992 | 3,856,896 | 2,196,397 | 3,856,896 | 3,732,480 | 2,343,255 | 1,919,973 | 2,897,880 | 3,279,987 | 3,273,510 | 3,715,840 | 2,108,457 | 1,532,326 |
| 1993 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 2,715,069 | 3,527,773 | 3,601,780 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 |
| 1994 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 | 3,856,896 | 3,732,480 | 3,544,673 | 3,732,480 | 3,856,896 |
| 1995 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,438,720 | 2,887,340 | 3,603,086 | 3,856,896 | 3,732,480 | 3,332,427 | 3,732,480 | 3,856,896 |
| 1996 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,185,501 | 3,562,006 | 3,856,896 | 3,732,480 | 3,414,587 | 3,413,740 | 2,953,210 |
| 1997 | 3,856,896 | 3,483,648 | 3,856,896 | 3,621,580 | 3,233,320 | 3,516,791 | 3,856,896 | 3,856,896 | 3,732,480 | 3,476,207 | 3,732,480 | 3,856,896 |
| 1998 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,514,034 | 2,781,327 | 3,774,253 | 3,642,860 | 3,732,480 | 3,661,067 | 3,221,592 | 2,366,008 |
| 1999 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,682,436 | 3,657,860 | 3,856,896 | 3,732,480 | 3,856,896 | 2,744,534 | 3,856,896 |
| 2000 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 |
| 2001 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 | 3,856,896 | 3,732,480 | 3,606,293 | 3,732,480 | 3,583,908 |
| 2002 | 3,456,683 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 2,695,192 | 3,856,896 | 3,856,896 | 3,732,480 | 3,674,760 | 3,732,480 | 3,856,896 |
| 2003 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 2,900,592 | 3,452,460 | 3,012,968 | 3,732,480 | 3,856,896 | 1,850,051 | 3,856,896 |
| 2004 | 2,304,028 | 3,483,648 | 3,856,896 | 3,732,480 | 2,945,761 | 2,092,244 | 3,856,896 | 3,067,741 | 3,386,148 | 3,359,814 | 3,732,480 | 3,856,896 |
| 2005 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,233,320 | 2,503,044 | 3,041,660 | 2,903,421 | 3,154,245 | 2,483,441 | 1,803,670 | 3,083,699 |
| 2006 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,172,249 | 3,767,406 | 3,856,896 | 3,732,480 | 3,517,287 | 3,605,888 | 3,856,896 |
| 2007 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,642,681 | 3,856,896 | 3,856,896 | 3,732,480 | 3,856,896 | 3,274,598 | 2,706,730 |
| 2008 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,116,927 | 2,271,141 | 3,541,466 | 3,656,554 | 3,253,632 | 2,442,361 | 2,373,489 | 3,105,447 |
| 2009 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,059,611 | 3,856,896 | 3,848,260 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 |
| 2010 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 | 3,856,896 | 3,732,480 | 3,216,034 | 3,732,480 | 3,856,896 |
| 2011 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 |
| 2012 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 2,748,198 | 3,603,086 | 3,177,288 | 3,724,064 | 3,414,587 | 3,002,940 | 3,856,896 |
| 2013 | 2,572,256 | 3,483,648 | 3,856,896 | 3,732,480 | 3,692,047 | 3,732,480 | 3,856,896 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 |
| 2014 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 2,642,185 | 3,856,896 | 3,842,719 | 3,677,094 | 3,732,480 | 3,346,120 | 2,479,502 |
| 2015 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,669,184 | 3,856,896 | 3,856,896 | 3,732,480 | 3,856,896 | 3,122,205 | 3,272,183 |
| 2016 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,669,184 | 3,856,896 | 3,856,896 | 3,732,480 | 3,530,980 | 2,380,115 | 2,177,523 |
| 2017 | 2,485,263 | 3,483,648 | 3,856,896 | 3,732,480 | 2,719,821 | 2,688,566 | 3,856,896 | 3,856,896 | 3,732,480 | 3,729,533 | 3,128,830 | 2,800,972 |
| 2018 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,164,854 | 2,191,631 | 2,795,180 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 |
| 2019 | 3,181,206 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 2,754,824 | 3,240,213 | 3,856,896 | 3,732,480 | 3,856,896 | 3,692,023 | 3,856,896 |
| 2020 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,390,794 | 3,496,914 | 3,856,896 | 3,382,687 | 3,732,480 | 3,305,040 | 3,732,480 | 3,856,896 |
| 2021 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 | 3,856,896 | 3,732,480 | 2,784,694 | 3,732,480 | 3,856,896 |
| 2022 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 |
| 2023 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,753,667 | 2,807,830 | 3,336,067 | 3,012,968 | 3,392,774 | 3,277,654 | 3,314,353 | 3,856,896 |
| 2024 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 2,398,028 | 1,654,941 | 2,528,161 | 3,252,601 | 3,732,480 | 3,585,753 | 1,856,677 | 655,149 |
| 2025 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,685,200 | 3,616,178 | 3,637,320 | 3,006,121 | 3,565,045 | 3,839,080 | 3,732,480 | 3,856,896 |
| 2026 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 | 3,759,254 | 3,732,480 | 3,856,896 | 3,102,327 | 3,475,167 |
| 2027 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,698,939 | 3,856,896 | 3,732,480 | 3,856,896 | 3,732,480 | 3,856,896 |
| 2028 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 3,514,034 | 2,860,837 | 3,514,080 | 3,622,320 | 3,732,480 | 3,856,896 | 3,732,480 | 2,141,276 |
| 2029 | 3,856,896 | 3,483,648 | 3,856,896 | 3,732,480 | 1,555,889 | 2,675,314 | 2,966,347 | 3,526,467 | 3,732,480 | 3,202,340 | 3,692,023 | 3,856,896 |

3. Energía mensual y anual generada en la minicentral en kWh

Tabla de energía generada en la minicentral (kWh)

| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1965 | 3,547,740 | 4,041,601 | 4,474,629 | 4,330,286 | 3,806,782 | 3,319,038 | 4,474,629 | 4,242,199 | 4,330,286 | 4,191,832 | 3,729,885 | 4,474,629 |
| 1966 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 3,076,004 | 4,330,286 | 4,394,636 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 |
| 1967 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,251,604 | 2,850,130 | 4,474,629 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,040,171 |
| 1968 | 4,474,629 | 3,338,222 | 4,474,629 | 4,330,286 | 2,329,339 | 2,665,642 | 3,155,490 | 3,773,548 | 4,151,408 | 3,254,530 | 3,506,962 | 2,879,523 |
| 1969 | 2,429,144 | 4,041,601 | 4,474,629 | 4,330,286 | 3,870,328 | 2,481,154 | 3,671,801 | 4,440,780 | 4,330,286 | 4,056,797 | 4,330,286 | 4,474,629 |
| 1970 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,087,739 | 4,474,629 | 4,474,629 | 4,330,286 | 4,474,629 | 4,214,167 | 4,474,629 |
| 1971 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,095,426 | 4,442,295 | 4,474,629 | 4,330,286 | 4,080,627 | 3,053,428 | 4,474,629 |
| 1972 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 | 4,474,629 | 4,330,286 | 4,474,629 | 3,061,115 | 4,474,629 |
| 1973 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 | 4,424,894 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 |
| 1974 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 3,044,231 | 4,330,286 | 4,474,629 | 4,474,629 | 4,330,286 | 4,474,629 | 3,460,840 | 3,956,067 |
| 1975 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 | 4,474,629 | 4,330,286 | 4,175,946 | 4,091,175 | 3,628,057 |
| 1976 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 3,409,620 | 3,980,121 | 4,474,629 | 4,474,629 | 4,330,286 | 3,754,954 | 2,730,574 | 4,474,629 |
| 1977 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 3,180,672 | 4,148,395 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 |
| 1978 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 3,592,315 | 3,288,290 | 3,655,914 | 4,329,575 | 4,330,286 | 4,474,629 | 3,253,291 | 4,474,629 |
| 1979 | 3,917,801 | 4,041,601 | 4,474,629 | 4,330,286 | 3,981,534 | 3,042,306 | 4,219,885 | 4,474,629 | 4,330,286 | 3,627,862 | 2,553,773 | 886,237 |
| 1980 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 3,369,904 | 3,449,717 | 3,743,290 | 3,439,932 | 4,330,286 | 4,088,570 | 4,330,286 | 4,474,629 |
| 1981 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,084,796 | 4,210,731 | 4,474,629 | 4,266,029 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 |
| 1982 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,080,741 | 4,267,544 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 |
| 1983 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 3,790,896 | 4,330,286 | 3,806,836 | 4,083,335 | 4,330,286 | 3,699,351 | 2,669,078 | 4,474,629 |
| 1984 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 |
| 1985 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 | 4,474,629 | 4,330,286 | 3,429,281 | 3,545,397 | 4,474,629 |
| 1986 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 | 4,474,629 | 4,330,286 | 4,358,641 | 3,622,267 | 4,474,629 |
| 1987 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 2,940,969 | 2,542,650 | 4,068,963 | 4,075,391 | 4,205,217 | 4,001,195 | 3,752,946 | 4,474,629 |
| 1988 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,331,090 | 3,860,924 | 4,289,774 | 3,953,535 | 2,315,476 | 2,702,903 |
| 1989 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 3,457,404 | 4,474,629 | 3,797,378 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 |
| 1990 | 4,474,629 | 4,041,601 | 4,474,629 | 3,884,196 | 1,535,015 | 4,264,540 | 3,219,036 | 3,797,378 | 4,330,286 | 4,350,697 | 4,330,286 | 4,474,629 |
| 1991 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 3,949,373 | 4,474,629 | 3,932,413 | 4,330,286 | 4,461,903 | 3,752,946 | 2,660,851 |
| 1992 | 4,474,629 | 2,548,179 | 4,474,629 | 4,330,286 | 2,718,558 | 2,227,483 | 3,362,014 | 3,805,321 | 3,797,806 | 4,310,981 | 2,446,155 | 1,777,749 |
| 1993 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 3,149,924 | 4,092,793 | 4,178,653 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 |
| 1994 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 | 4,474,629 | 4,330,286 | 4,112,400 | 4,330,286 | 4,474,629 |
| 1995 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 3,989,477 | 3,349,786 | 4,180,168 | 4,474,629 | 4,330,286 | 3,866,160 | 4,330,286 | 4,474,629 |
| 1996 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 3,695,701 | 4,132,509 | 4,474,629 | 4,330,286 | 3,961,478 | 3,960,496 | 3,426,205 |
| 1997 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 3,751,180 | 4,080,052 | 4,474,629 | 4,474,629 | 4,330,286 | 4,032,968 | 4,330,286 | 4,474,629 |
| 1998 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,076,853 | 3,226,794 | 4,378,750 | 4,226,313 | 4,330,286 | 4,247,435 | 3,737,572 | 2,744,956 |
| 1999 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,272,227 | 4,243,714 | 4,474,629 | 4,330,286 | 4,474,629 | 3,184,108 | 4,474,629 |
| 2000 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 |
| 2001 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 | 4,474,629 | 4,330,286 | 4,183,889 | 4,330,286 | 4,157,918 |
| 2002 | 4,010,317 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 3,126,863 | 4,474,629 | 4,474,629 | 4,330,286 | 4,263,322 | 4,330,286 | 4,474,629 |
| 2003 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 3,365,160 | 4,005,417 | 3,495,535 | 4,330,286 | 4,474,629 | 2,146,361 | 4,474,629 |
| 2004 | 2,673,048 | 4,041,601 | 4,474,629 | 4,330,286 | 3,417,564 | 2,427,345 | 4,474,629 | 3,559,081 | 3,928,485 | 3,897,932 | 4,330,286 | 4,474,629 |
| 2005 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 3,751,180 | 3,903,939 | 3,528,823 | 3,368,443 | 3,659,439 | 2,881,197 | 2,092,552 | 3,577,594 |
| 2006 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 3,680,327 | 4,370,806 | 4,474,629 | 4,330,286 | 4,080,627 | 4,183,419 | 4,474,629 |
| 2007 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,226,105 | 4,474,629 | 4,474,629 | 4,330,286 | 4,474,629 | 3,799,068 | 3,140,249 |
| 2008 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 3,616,145 | 2,634,894 | 4,108,679 | 4,242,199 | 3,774,745 | 2,833,538 | 2,753,635 | 3,602,826 |
| 2009 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,474,629 | 4,474,629 | 4,464,610 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 |
| 2010 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 | 4,474,629 | 4,330,286 | 3,731,124 | 4,330,286 | 4,474,629 |
| 2011 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 |
| 2012 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 3,188,359 | 4,180,168 | 3,686,172 | 4,320,522 | 3,961,478 | 3,483,901 | 4,474,629 |
| 2013 | 2,984,237 | 4,041,601 | 4,474,629 | 4,330,286 | 4,283,377 | 4,330,286 | 4,474,629 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 |
| 2014 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,458,182 | 4,266,029 | 4,330,286 | 3,882,046 | 2,876,627 | 4,474,629 |
| 2015 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 3,065,367 | 4,474,629 | 4,474,629 | 4,330,286 | 4,474,629 | 3,622,267 | 3,796,267 |
| 2016 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,256,853 | 4,474,629 | 4,474,629 | 4,330,286 | 4,096,514 | 2,761,322 | 2,526,283 |
| 2017 | 2,883,311 | 4,041,601 | 4,474,629 | 4,330,286 | 3,155,437 | 3,119,176 | 4,474,629 | 4,474,629 | 4,330,286 | 4,326,868 | 3,629,954 | 3,249,585 |
| 2018 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 3,671,747 | 2,542,650 | 3,242,866 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 |
| 2019 | 3,690,718 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 3,196,046 | 3,759,177 | 4,474,629 | 4,330,286 | 4,474,629 | 4,283,350 | 4,474,629 |
| 2020 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 3,933,874 | 4,056,991 | 4,474,629 | 3,924,470 | 4,330,286 | 3,834,387 | 4,330,286 | 4,474,629 |
| 2021 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 | 4,474,629 | 4,330,286 | 3,230,700 | 4,330,286 | 4,474,629 |
| 2022 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 |
| 2023 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,354,866 | 3,257,542 | 3,870,382 | 3,495,535 | 3,936,172 | 3,802,614 | 3,845,190 | 4,474,629 |
| 2024 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 2,782,104 | 1,920,002 | 2,933,079 | 3,773,548 | 4,330,286 | 4,160,060 | 2,154,048 | 760,079 |
| 2025 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,275,434 | 4,195,357 | 4,219,885 | 3,487,591 | 4,136,034 | 4,453,960 | 4,330,286 | 4,474,629 |
| 2026 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 | 4,361,348 | 4,330,286 | 4,474,629 | 3,599,206 | 4,031,761 |
| 2027 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,291,374 | 4,474,629 | 4,330,286 | 4,474,629 | 4,330,286 | 4,474,629 |
| 2028 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 4,076,853 | 3,319,038 | 4,076,906 | 4,202,483 | 4,330,286 | 4,474,629 | 4,330,286 | 2,484,230 |
| 2029 | 4,474,629 | 4,041,601 | 4,474,629 | 4,330,286 | 1,805,085 | 3,103,802 | 3,441,447 | 4,091,278 | 4,330,286 | 3,715,238 | 4,283,350 | 4,474,629 |

4. Ingresos anuales del proyecto

Tabla de ingresos del proyecto (s/.)

| AÑO | ENERGÍA (GWh) | INGRESOS (s/.) | TOTAL |
|------|---------------|----------------|--------------|
| 2015 | - | - | - |
| 2016 | - | - | - |
| 2017 | - | - | - |
| 2018 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2019 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2020 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2021 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2022 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2023 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2024 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2025 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2026 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2027 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2028 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2029 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2030 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2031 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2032 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2033 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2034 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2035 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2036 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2037 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2038 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2039 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2040 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2041 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2042 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2043 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2044 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2045 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2046 | 49.50 | 9,126,029.31 | 9,126,029.31 |
| 2047 | 49.50 | 9,126,029.31 | 9,126,029.31 |

5. Egresos anuales del proyecto

Tabla de egresos del proyecto (s/.)

| AÑO | INVERSIÓN | PERSONAL | REPUESTOS Y CONSUMIBLES | OTROS COSTOS INDIRECTOS | OSINERGMIN DGE COES | CANON DE AGUA | TOTAL EGRESOS |
|------|------------|----------|----------------------------|----------------------------|------------------------|------------------|------------------|
| 2015 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2016 | 12,730,784 | 0 | 0 | 0 | 0 | 0 | 12,730,784 |
| 2017 | 29,705,163 | 0 | 0 | 0 | 0 | 0 | 29,705,163 |
| 2018 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2019 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2020 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2021 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2022 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2023 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2024 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2025 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2026 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2027 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2028 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2029 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2030 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2031 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2032 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2033 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2034 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2035 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2036 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2037 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2038 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2039 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2040 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2041 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2042 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2043 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2044 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2045 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2046 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |
| 2047 | 0 | 42,902 | 39,120 | 584,177 | 91,260 | 91,260 | 848,719 |

Para los egresos anuales del proyecto, se contempló gastos personal fijo, repuesto y combustible, pago al COES, Osinergmin y DGE (1% del ingreso anual) y Canon de agua (1% del ingreso por energía anual) según lo indica la LCE (Ley de Concesiones Eléctricas). Los valores de personal fijo, repuestos y combustibles fueron obtenidos de proyectos similares de minicentrales hidroeléctricas realizados por empresas peruanas.

6. Flujo económico

Tabla de flujo económico

| AÑO | TOTAL | TOTAL | FLUJO |
|------|-----------|------------|-------------|
| | INGRESOS | EGRESOS | ECONÓMICO |
| 2017 | 0 | 12,730,784 | -12,730,784 |
| 2018 | 0 | 29,705,163 | -29,705,163 |
| 2019 | 9,126,029 | 848,719 | 8,277,310 |
| 2020 | 9,126,029 | 848,719 | 8,277,310 |
| 2021 | 9,126,029 | 848,719 | 8,277,310 |
| 2022 | 9,126,029 | 848,719 | 8,277,310 |
| 2023 | 9,126,029 | 848,719 | 8,277,310 |
| 2024 | 9,126,029 | 848,719 | 8,277,310 |
| 2025 | 9,126,029 | 848,719 | 8,277,310 |
| 2026 | 9,126,029 | 848,719 | 8,277,310 |
| 2027 | 9,126,029 | 848,719 | 8,277,310 |
| 2028 | 9,126,029 | 848,719 | 8,277,310 |
| 2029 | 9,126,029 | 848,719 | 8,277,310 |
| 2030 | 9,126,029 | 848,719 | 8,277,310 |
| 2031 | 9,126,029 | 848,719 | 8,277,310 |
| 2032 | 9,126,029 | 848,719 | 8,277,310 |
| 2033 | 9,126,029 | 848,719 | 8,277,310 |
| 2034 | 9,126,029 | 848,719 | 8,277,310 |
| 2035 | 9,126,029 | 848,719 | 8,277,310 |
| 2036 | 9,126,029 | 848,719 | 8,277,310 |
| 2037 | 9,126,029 | 848,719 | 8,277,310 |
| 2038 | 9,126,029 | 848,719 | 8,277,310 |
| 2039 | 9,126,029 | 848,719 | 8,277,310 |
| 2040 | 9,126,029 | 848,719 | 8,277,310 |
| 2041 | 9,126,029 | 848,719 | 8,277,310 |
| 2042 | 9,126,029 | 848,719 | 8,277,310 |
| 2043 | 9,126,029 | 848,719 | 8,277,310 |
| 2044 | 9,126,029 | 848,719 | 8,277,310 |
| 2045 | 9,126,029 | 848,719 | 8,277,310 |
| 2046 | 9,126,029 | 848,719 | 8,277,310 |
| 2047 | 9,126,029 | 848,719 | 8,277,310 |
| 2048 | 9,126,029 | 848,719 | 8,277,310 |

El flujo económico es igual al total de ingresos menos el total de egresos

7. Indicadores económicos

Tabla de indicadores económicos para diferentes tasas

| ANÁLISIS ECONÓMICO | | | | |
|--------------------|----------------|----------------|----------------|--------------|
| TASA | VANB (US\$) | VANC (US\$) | VANE (US\$) | B/C (ECO) |
| 9% | 78,913,953.26 | 44,020,842.64 | 34,893,110.62 | 1.79 |
| 10% | 71,099,419.57 | 42,735,394.26 | 28,364,025.32 | 1.66 |
| 11% | 64,393,966.24 | 41,567,178.35 | 22,826,787.88 | 1.55 |
| 12% | 58,603,192.72 | 40,497,631.59 | 18,105,561.13 | 1.45 |
| 13% | 53,571,581.92 | 39,511,827.67 | 14,059,754.25 | 1.36 |
| 14% | 49,173,990.38 | 38,597,684.83 | 10,576,305.56 | 1.27 |
| 15% | 45,309,128.61 | 37,745,358.53 | 7,563,770.08 | 1.20 |
| 16% | 41,894,541.11 | 36,946,773.62 | 4,947,767.49 | 1.13 |
| 17% | 38,862,722.25 | 36,195,262.20 | 2,667,460.05 | 1.07 |
| 18% | 36,158,095.94 | 35,485,281.95 | 672,813.98 | 1.02 |
| 19% | 33,734,655.55 | 34,812,195.78 | (1,077,540.23) | 0.97 |
| 20% | 31,554,110.75 | 34,172,098.75 | (2,617,987.99) | 0.92 |
| 21% | 29,584,425.21 | 33,561,681.40 | (3,977,256.19) | 0.88 |
| 22% | 27,798,657.18 | 32,978,121.23 | (5,179,464.06) | 0.84 |
| | | | | |
| | TIR | 18.37% | | |
| | | | | |

Evaluación financiera para el $Q=1.44m^3/s$

Tabla de flujo financiero (s/.)

| CUOTA | INTERÉS | AMORTIZACIÓN | SALDO | FLUJO FINANCIERO |
|-----------|-----------|--------------|------------|------------------|
| 0 | 0 | 0 | 0 | -12,730,784 |
| 0 | 0 | 0 | 0 | -16,974,379 |
| 1,580,446 | 1,527,694 | 52,752 | 12,678,032 | 6,696,864 |
| 1,580,446 | 1,521,364 | 59,082 | 12,618,950 | 6,696,864 |
| 1,580,446 | 1,514,274 | 66,172 | 12,552,778 | 6,696,864 |
| 1,580,446 | 1,506,333 | 74,113 | 12,478,665 | 6,696,864 |
| 1,580,446 | 1,497,440 | 83,006 | 12,395,659 | 6,696,864 |
| 1,580,446 | 1,487,479 | 92,967 | 12,302,692 | 6,696,864 |
| 1,580,446 | 1,476,323 | 104,123 | 12,198,569 | 6,696,864 |
| 1,580,446 | 1,463,828 | 116,618 | 12,081,951 | 6,696,864 |
| 1,580,446 | 1,449,834 | 130,612 | 11,951,339 | 6,696,864 |
| 1,580,446 | 1,434,161 | 146,285 | 11,805,053 | 6,696,864 |
| 1,580,446 | 1,416,606 | 163,840 | 11,641,214 | 6,696,864 |
| 1,580,446 | 1,396,946 | 183,501 | 11,457,713 | 6,696,864 |
| 1,580,446 | 1,374,926 | 205,521 | 11,252,192 | 6,696,864 |
| 1,580,446 | 1,350,263 | 230,183 | 11,022,009 | 6,696,864 |
| 1,580,446 | 1,322,641 | 257,805 | 10,764,204 | 6,696,864 |
| 1,580,446 | 1,291,705 | 288,742 | 10,475,463 | 6,696,864 |
| 1,580,446 | 1,257,056 | 323,391 | 10,152,072 | 6,696,864 |
| 1,580,446 | 1,218,249 | 362,197 | 9,789,875 | 6,696,864 |
| 1,580,446 | 1,174,785 | 405,661 | 9,384,214 | 6,696,864 |
| 1,580,446 | 1,126,106 | 454,340 | 8,929,873 | 6,696,864 |
| 1,580,446 | 1,071,585 | 508,861 | 8,421,012 | 6,696,864 |
| 1,580,446 | 1,010,521 | 569,925 | 7,851,087 | 6,696,864 |
| 1,580,446 | 942,130 | 638,316 | 7,212,771 | 6,696,864 |
| 1,580,446 | 865,533 | 714,914 | 6,497,858 | 6,696,864 |
| 1,580,446 | 779,743 | 800,703 | 5,697,155 | 6,696,864 |
| 1,580,446 | 683,659 | 896,788 | 4,800,367 | 6,696,864 |
| 1,580,446 | 576,044 | 1,004,402 | 3,795,965 | 6,696,864 |
| 1,580,446 | 455,516 | 1,124,930 | 2,671,035 | 6,696,864 |
| 1,580,446 | 320,524 | 1,259,922 | 1,411,113 | 6,696,864 |
| 1,580,446 | 169,334 | 1,411,113 | 0 | 6,696,864 |

Tabla de indicadores financieros para diferentes tasas

| ANÁLISIS FINANCIERO | | | |
|----------------------|----------------------|------------------------------|--------------|
| VANF (US\$) | VANC(fin) (US\$) | VANC (fin+egresos) (US\$) | B/C (FIN) |
| 31,942,035.43 | 13,666,321.63 | 46,971,917.83 | 1.68 |
| 26,572,334.28 | 12,313,000.37 | 44,527,085.30 | 1.60 |
| 22,007,628.32 | 11,151,749.69 | 42,386,337.92 | 1.52 |
| 18,105,561.13 | 10,148,903.30 | 40,497,631.59 | 1.45 |
| 14,752,297.02 | 9,277,528.73 | 38,819,284.90 | 1.38 |
| 11,856,277.03 | 8,515,953.65 | 37,317,713.35 | 1.32 |
| 9,343,435.27 | 7,846,636.73 | 35,965,693.34 | 1.26 |
| 7,153,515.76 | 7,255,298.33 | 34,741,025.35 | 1.21 |
| 5,237,222.67 | 6,730,247.82 | 33,625,499.58 | 1.16 |
| 3,554,004.52 | 6,261,860.52 | 32,604,091.42 | 1.11 |
| 2,070,322.74 | 5,842,169.02 | 31,664,332.81 | 1.07 |
| 758,292.25 | 5,464,542.18 | 30,795,818.50 | 1.02 |
| (405,391.18) | 5,123,431.96 | 29,989,816.39 | 0.99 |
| (1,440,301.31) | 4,814,172.58 | 29,238,958.49 | 0.95 |
| | TIR | 20.64% | |

Evaluación económica para el $Q=1.38\text{m}^3/\text{s}$

1. Descargas medias mensuales y anuales para el caudal de captación $1.38\text{ m}^3/\text{s}$ captadas en la bocatoma

Tabla de descargas medias generadas mensuales y anuales en la bocatoma (m^3/s)

| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1965 | 1.14 | 4.10 | 3.81 | 1.67 | 1.23 | 1.10 | 1.44 | 1.37 | 1.59 | 1.35 | 1.24 | 1.51 |
| 1966 | 4.01 | 3.19 | 3.71 | 2.43 | 0.99 | 1.53 | 1.41 | 1.48 | 1.70 | 1.81 | 1.63 | 1.76 |
| 1967 | 1.49 | 7.76 | 7.21 | 2.42 | 1.37 | 0.95 | 1.63 | 1.92 | 2.17 | 2.31 | 1.78 | 1.30 |
| 1968 | 1.55 | 1.19 | 2.46 | 1.80 | 0.75 | 0.89 | 1.02 | 1.21 | 1.38 | 1.05 | 1.17 | 0.93 |
| 1969 | 0.78 | 2.36 | 3.14 | 3.13 | 1.25 | 0.83 | 1.18 | 1.43 | 1.62 | 1.31 | 1.46 | 4.15 |
| 1970 | 6.02 | 3.09 | 3.20 | 2.97 | 2.00 | 1.36 | 1.53 | 1.54 | 2.10 | 1.99 | 1.40 | 2.72 |
| 1971 | 3.67 | 4.90 | 7.02 | 3.94 | 1.79 | 1.36 | 1.43 | 1.66 | 1.83 | 1.31 | 1.02 | 1.83 |
| 1972 | 4.83 | 4.12 | 8.48 | 5.07 | 1.90 | 1.60 | 1.64 | 1.50 | 1.68 | 1.47 | 1.02 | 2.41 |
| 1973 | 5.27 | 7.28 | 7.00 | 5.56 | 2.04 | 1.54 | 1.66 | 1.42 | 2.02 | 1.83 | 1.90 | 3.40 |
| 1974 | 3.95 | 4.49 | 5.59 | 2.69 | 0.98 | 1.52 | 1.57 | 1.67 | 1.79 | 1.69 | 1.15 | 1.27 |
| 1975 | 2.27 | 2.46 | 6.61 | 2.86 | 1.74 | 1.46 | 1.48 | 1.58 | 2.24 | 1.34 | 1.36 | 1.17 |
| 1976 | 2.74 | 4.80 | 4.44 | 2.56 | 1.10 | 1.32 | 1.45 | 1.56 | 1.72 | 1.21 | 0.91 | 1.77 |
| 1977 | 1.65 | 6.12 | 3.89 | 2.34 | 1.64 | 1.06 | 1.34 | 1.47 | 1.67 | 1.56 | 2.19 | 1.91 |
| 1978 | 2.11 | 4.77 | 2.88 | 1.82 | 1.16 | 1.09 | 1.18 | 1.39 | 1.49 | 1.56 | 1.08 | 1.65 |
| 1979 | 1.26 | 4.64 | 6.15 | 3.04 | 1.28 | 1.01 | 1.36 | 1.46 | 2.20 | 1.17 | 0.85 | 0.29 |
| 1980 | 2.27 | 2.00 | 3.73 | 2.57 | 1.08 | 1.15 | 1.20 | 1.11 | 1.88 | 1.32 | 1.96 | 2.01 |
| 1981 | 2.70 | 7.45 | 6.07 | 2.68 | 1.31 | 1.40 | 1.62 | 1.37 | 1.61 | 1.79 | 1.90 | 2.52 |
| 1982 | 2.29 | 7.79 | 3.39 | 1.80 | 1.48 | 1.02 | 1.37 | 2.09 | 1.59 | 1.68 | 2.09 | 1.56 |
| 1983 | 2.39 | 1.48 | 3.77 | 3.75 | 1.22 | 1.47 | 1.23 | 1.31 | 1.62 | 1.19 | 0.89 | 1.79 |
| 1984 | 2.52 | 8.75 | 6.87 | 4.19 | 2.02 | 1.62 | 1.44 | 1.50 | 1.86 | 1.91 | 1.60 | 3.45 |
| 1985 | 2.06 | 3.63 | 5.04 | 3.95 | 1.78 | 1.60 | 1.73 | 1.46 | 1.74 | 1.10 | 1.18 | 2.24 |
| 1986 | 4.60 | 5.11 | 6.85 | 5.15 | 2.35 | 1.83 | 1.68 | 1.53 | 1.78 | 1.40 | 1.20 | 1.71 |
| 1987 | 4.75 | 4.86 | 3.17 | 1.67 | 0.95 | 0.85 | 1.31 | 1.31 | 1.40 | 1.29 | 1.25 | 2.30 |
| 1988 | 3.87 | 5.54 | 3.43 | 4.01 | 1.73 | 1.45 | 1.39 | 1.24 | 1.43 | 1.27 | 0.77 | 0.87 |
| 1989 | 4.13 | 6.43 | 6.05 | 4.11 | 1.80 | 1.15 | 1.49 | 1.22 | 1.57 | 1.59 | 1.56 | 1.88 |
| 1990 | 2.64 | 1.58 | 1.88 | 1.29 | 0.49 | 1.42 | 1.04 | 1.22 | 1.56 | 1.40 | 2.86 | 2.34 |
| 1991 | 2.09 | 2.64 | 5.23 | 2.42 | 1.80 | 1.31 | 1.53 | 1.27 | 1.54 | 1.44 | 1.25 | 0.86 |
| 1992 | 1.56 | 0.91 | 2.48 | 1.77 | 0.87 | 0.74 | 1.08 | 1.22 | 1.26 | 1.39 | 0.81 | 0.57 |
| 1993 | 2.13 | 4.18 | 5.11 | 3.48 | 1.85 | 1.05 | 1.32 | 1.34 | 1.65 | 1.65 | 2.95 | 4.17 |
| 1994 | 4.88 | 5.44 | 5.37 | 5.33 | 2.63 | 2.00 | 1.66 | 1.55 | 1.90 | 1.32 | 1.58 | 1.70 |
| 1995 | 2.64 | 2.30 | 3.77 | 3.54 | 1.28 | 1.11 | 1.35 | 1.45 | 1.62 | 1.24 | 1.62 | 2.10 |
| 1996 | 3.72 | 5.75 | 5.17 | 3.71 | 1.60 | 1.23 | 1.33 | 1.57 | 1.67 | 1.27 | 1.32 | 1.10 |
| 1997 | 2.25 | 4.51 | 2.97 | 1.40 | 1.21 | 1.36 | 1.70 | 1.73 | 1.96 | 1.30 | 1.68 | 2.71 |
| 1998 | 4.95 | 5.20 | 4.88 | 2.78 | 1.31 | 1.07 | 1.41 | 1.36 | 1.58 | 1.37 | 1.24 | 0.88 |
| 1999 | 1.58 | 4.98 | 4.84 | 3.78 | 2.29 | 1.42 | 1.37 | 1.60 | 1.82 | 1.50 | 1.06 | 2.72 |
| 2000 | 4.43 | 6.03 | 5.55 | 2.80 | 2.29 | 1.50 | 1.79 | 1.55 | 1.82 | 2.12 | 1.59 | 2.68 |
| 2001 | 6.22 | 5.23 | 5.84 | 3.83 | 2.36 | 1.62 | 1.73 | 1.79 | 2.16 | 1.35 | 1.77 | 1.34 |
| 2002 | 1.29 | 3.39 | 5.31 | 3.38 | 1.44 | 1.04 | 1.46 | 1.63 | 1.80 | 1.37 | 1.93 | 2.44 |
| 2003 | 4.06 | 4.55 | 5.38 | 3.57 | 1.47 | 1.12 | 1.29 | 1.12 | 1.48 | 1.54 | 0.71 | 1.77 |
| 2004 | 0.86 | 3.58 | 3.23 | 2.71 | 1.10 | 0.81 | 1.51 | 1.15 | 1.31 | 1.25 | 2.13 | 3.12 |
| 2005 | 3.88 | 3.74 | 4.92 | 3.90 | 1.21 | 0.97 | 1.14 | 1.08 | 1.22 | 0.93 | 0.70 | 1.15 |
| 2006 | 2.83 | 4.19 | 5.68 | 4.63 | 1.53 | 1.22 | 1.41 | 1.54 | 1.56 | 1.31 | 1.39 | 2.37 |
| 2007 | 4.56 | 4.81 | 5.82 | 4.31 | 1.84 | 1.41 | 1.46 | 1.60 | 1.97 | 1.60 | 1.26 | 1.01 |
| 2008 | 4.33 | 5.60 | 4.58 | 2.74 | 1.16 | 0.88 | 1.32 | 1.37 | 1.26 | 0.91 | 0.92 | 1.16 |
| 2009 | 3.49 | 6.71 | 5.79 | 3.45 | 1.57 | 1.18 | 1.50 | 1.44 | 1.63 | 1.78 | 3.07 | 4.49 |
| 2010 | 7.15 | 4.29 | 4.65 | 4.01 | 1.71 | 1.91 | 1.84 | 1.58 | 1.60 | 1.20 | 1.54 | 2.75 |
| 2011 | 3.64 | 6.61 | 8.03 | 6.12 | 2.42 | 1.60 | 1.65 | 1.56 | 1.99 | 2.01 | 1.78 | 1.47 |
| 2012 | 3.37 | 6.49 | 5.47 | 4.49 | 1.73 | 1.06 | 1.35 | 1.19 | 1.44 | 1.27 | 1.16 | 2.51 |
| 2013 | 0.96 | 6.77 | 6.79 | 2.88 | 1.38 | 1.53 | 1.67 | 1.78 | 2.07 | 1.93 | 1.69 | 2.83 |
| 2014 | 3.51 | 3.79 | 5.41 | 3.18 | 1.71 | 1.75 | 1.43 | 1.37 | 1.76 | 1.25 | 0.96 | 1.68 |
| 2015 | 3.94 | 4.51 | 5.27 | 3.47 | 1.91 | 1.02 | 1.64 | 1.48 | 1.52 | 1.59 | 1.20 | 1.22 |
| 2016 | 2.38 | 1.58 | 3.76 | 2.66 | 1.73 | 1.42 | 1.87 | 1.51 | 1.87 | 1.32 | 0.92 | 0.81 |
| 2017 | 0.93 | 2.46 | 4.14 | 1.91 | 1.02 | 1.04 | 1.55 | 1.73 | 2.04 | 1.39 | 1.21 | 1.05 |
| 2018 | 3.13 | 4.54 | 3.12 | 2.52 | 1.18 | 0.85 | 1.04 | 1.59 | 2.09 | 1.86 | 1.54 | 3.61 |
| 2019 | 1.19 | 4.59 | 3.29 | 2.26 | 1.59 | 1.06 | 1.21 | 1.49 | 1.50 | 1.44 | 1.42 | 2.14 |
| 2020 | 1.66 | 4.93 | 3.01 | 2.91 | 1.27 | 1.35 | 1.50 | 1.26 | 1.80 | 1.23 | 1.66 | 3.13 |
| 2021 | 2.84 | 3.70 | 4.55 | 4.62 | 2.30 | 1.76 | 1.85 | 1.47 | 1.62 | 1.04 | 1.52 | 2.78 |
| 2022 | 2.37 | 4.13 | 2.91 | 3.57 | 2.01 | 2.08 | 1.86 | 2.02 | 2.50 | 2.23 | 3.39 | 4.22 |
| 2023 | 6.12 | 2.07 | 4.39 | 2.41 | 1.40 | 1.08 | 1.25 | 1.12 | 1.31 | 1.22 | 1.28 | 2.14 |
| 2024 | 2.99 | 4.99 | 5.78 | 2.39 | 0.90 | 0.64 | 0.94 | 1.21 | 1.68 | 1.34 | 0.72 | 0.24 |
| 2025 | 2.35 | 5.41 | 4.02 | 1.85 | 1.38 | 1.40 | 1.36 | 1.12 | 1.38 | 1.43 | 1.70 | 1.51 |
| 2026 | 4.17 | 5.80 | 5.50 | 3.06 | 1.88 | 1.51 | 1.53 | 1.40 | 1.82 | 1.70 | 1.20 | 1.30 |
| 2027 | 2.60 | 5.61 | 9.23 | 5.03 | 2.35 | 1.47 | 1.38 | 1.64 | 1.66 | 2.02 | 2.33 | 1.86 |
| 2028 | 1.52 | 2.90 | 3.91 | 2.23 | 1.31 | 1.10 | 1.31 | 1.35 | 1.70 | 1.55 | 1.48 | 0.80 |
| 2029 | 1.95 | 1.59 | 2.21 | 1.67 | 0.58 | 1.03 | 1.11 | 1.32 | 1.64 | 1.20 | 1.42 | 3.31 |

2. Volúmenes turbinados mensuales y anuales en la minicentral hidroeléctrica en m³

Tabla de volúmenes turbinados mensuales y anuales (m³)

| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1965 | 3,057,966 | 3,338,496 | 3,696,192 | 3,576,960 | 3,281,247 | 2,860,837 | 3,696,192 | 3,656,554 | 3,576,960 | 3,613,140 | 3,214,966 | 3,696,192 |
| 1966 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 2,651,354 | 3,576,960 | 3,696,192 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 |
| 1967 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,664,660 | 2,456,663 | 3,696,192 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,482,416 |
| 1968 | 3,696,192 | 2,877,373 | 3,696,192 | 3,576,960 | 2,007,768 | 2,297,644 | 2,719,867 | 3,252,601 | 3,576,960 | 2,805,234 | 3,022,818 | 2,481,998 |
| 1969 | 2,093,795 | 3,338,496 | 3,696,192 | 3,576,960 | 3,336,020 | 2,138,625 | 3,164,900 | 3,696,192 | 3,576,960 | 3,496,747 | 3,576,960 | 3,696,192 |
| 1970 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,523,417 | 3,696,192 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 |
| 1971 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,530,043 | 3,696,192 | 3,696,192 | 3,576,960 | 3,517,287 | 2,631,895 | 3,696,192 |
| 1972 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 | 3,696,192 | 3,576,960 | 3,696,192 | 2,638,521 | 3,696,192 |
| 1973 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 |
| 1974 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 2,623,968 | 3,576,960 | 3,696,192 | 3,696,192 | 3,576,960 | 3,696,192 | 2,983,063 | 3,409,922 |
| 1975 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 | 3,696,192 | 3,576,960 | 3,599,447 | 3,526,378 | 3,127,195 |
| 1976 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 2,938,914 | 3,430,656 | 3,696,192 | 3,696,192 | 3,576,960 | 3,236,574 | 2,353,612 | 3,696,192 |
| 1977 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 2,741,572 | 3,575,700 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 |
| 1978 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,096,387 | 2,834,334 | 3,151,207 | 3,696,192 | 3,576,960 | 3,696,192 | 2,804,166 | 3,696,192 |
| 1979 | 3,376,940 | 3,338,496 | 3,696,192 | 3,576,960 | 3,431,874 | 2,622,308 | 3,637,320 | 3,696,192 | 3,576,960 | 3,127,027 | 2,201,218 | 763,890 |
| 1980 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 2,904,681 | 2,973,475 | 3,226,520 | 2,965,041 | 3,576,960 | 3,524,133 | 3,576,960 | 3,696,192 |
| 1981 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,520,880 | 3,576,960 | 3,696,192 | 3,677,094 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 |
| 1982 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 2,655,437 | 3,678,400 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 |
| 1983 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,267,554 | 3,576,960 | 3,281,293 | 3,519,621 | 3,576,960 | 3,188,647 | 2,300,605 | 3,696,192 |
| 1984 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 |
| 1985 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 | 3,696,192 | 3,576,960 | 2,955,861 | 3,055,947 | 3,696,192 |
| 1986 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 | 3,696,192 | 3,576,960 | 3,696,192 | 3,122,205 | 3,696,192 |
| 1987 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 2,534,961 | 2,191,631 | 3,507,233 | 3,512,774 | 3,576,960 | 3,448,820 | 3,234,843 | 3,696,192 |
| 1988 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 | 3,327,914 | 3,576,960 | 3,407,740 | 1,995,819 | 2,329,761 |
| 1989 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 2,980,101 | 3,696,192 | 3,273,141 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 |
| 1990 | 3,696,192 | 3,338,496 | 3,696,192 | 3,347,974 | 1,323,102 | 3,576,960 | 2,774,640 | 3,273,141 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 |
| 1991 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,404,152 | 3,696,192 | 3,389,534 | 3,576,960 | 3,696,192 | 3,234,843 | 2,293,514 |
| 1992 | 3,696,192 | 2,196,397 | 3,696,192 | 3,576,960 | 2,343,255 | 1,919,973 | 2,897,880 | 3,279,987 | 3,273,510 | 3,696,192 | 2,108,457 | 1,532,326 |
| 1993 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 2,715,069 | 3,527,773 | 3,601,780 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 |
| 1994 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 | 3,696,192 | 3,576,960 | 3,544,673 | 3,576,960 | 3,696,192 |
| 1995 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,438,720 | 2,887,340 | 3,603,086 | 3,696,192 | 3,576,960 | 3,332,427 | 3,576,960 | 3,696,192 |
| 1996 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,185,501 | 3,562,006 | 3,696,192 | 3,576,960 | 3,414,587 | 3,413,740 | 2,953,210 |
| 1997 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,233,320 | 3,516,791 | 3,696,192 | 3,696,192 | 3,576,960 | 3,476,207 | 3,576,960 | 3,696,192 |
| 1998 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,514,034 | 2,781,327 | 3,696,192 | 3,642,860 | 3,576,960 | 3,661,067 | 3,221,592 | 2,366,008 |
| 1999 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,657,860 | 3,696,192 | 3,576,960 | 3,696,192 | 2,744,534 | 3,696,192 |
| 2000 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 |
| 2001 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 | 3,696,192 | 3,576,960 | 3,606,293 | 3,576,960 | 3,583,908 |
| 2002 | 3,456,683 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 2,695,192 | 3,696,192 | 3,696,192 | 3,576,960 | 3,674,760 | 3,576,960 | 3,696,192 |
| 2003 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 2,900,592 | 3,452,460 | 3,012,968 | 3,576,960 | 3,696,192 | 1,850,051 | 3,696,192 |
| 2004 | 2,304,028 | 3,338,496 | 3,696,192 | 3,576,960 | 2,945,761 | 2,092,244 | 3,696,192 | 3,067,741 | 3,386,148 | 3,359,814 | 3,576,960 | 3,696,192 |
| 2005 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,233,320 | 2,503,044 | 3,041,660 | 2,903,421 | 3,154,245 | 2,483,441 | 1,803,670 | 3,083,699 |
| 2006 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,172,249 | 3,696,192 | 3,696,192 | 3,576,960 | 3,517,287 | 3,576,960 | 3,696,192 |
| 2007 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 | 3,696,192 | 3,576,960 | 3,696,192 | 3,274,598 | 2,706,730 |
| 2008 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,116,927 | 2,271,141 | 3,541,466 | 3,656,554 | 3,253,632 | 2,442,361 | 2,373,489 | 3,105,447 |
| 2009 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,059,611 | 3,696,192 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 |
| 2010 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 | 3,696,192 | 3,576,960 | 3,216,034 | 3,576,960 | 3,696,192 |
| 2011 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 |
| 2012 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 2,748,198 | 3,603,086 | 3,177,288 | 3,576,960 | 3,414,587 | 3,002,940 | 3,696,192 |
| 2013 | 2,572,256 | 3,338,496 | 3,696,192 | 3,576,960 | 3,692,047 | 3,576,960 | 3,696,192 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 |
| 2014 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 | 3,677,094 | 3,576,960 | 3,346,120 | 2,479,502 | 3,696,192 |
| 2015 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 2,642,185 | 3,696,192 | 3,696,192 | 3,576,960 | 3,696,192 | 3,122,205 | 3,272,183 |
| 2016 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 | 3,696,192 | 3,576,960 | 3,530,980 | 2,380,115 | 2,177,523 |
| 2017 | 2,485,263 | 3,338,496 | 3,696,192 | 3,576,960 | 2,719,821 | 2,688,566 | 3,696,192 | 3,696,192 | 3,576,960 | 3,696,192 | 3,128,830 | 2,800,972 |
| 2018 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,164,854 | 2,191,631 | 2,795,180 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 |
| 2019 | 3,181,206 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 2,754,824 | 3,240,213 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 |
| 2020 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,390,794 | 3,496,914 | 3,696,192 | 3,382,687 | 3,576,960 | 3,305,040 | 3,576,960 | 3,696,192 |
| 2021 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 | 3,696,192 | 3,576,960 | 2,784,694 | 3,576,960 | 3,696,192 |
| 2022 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 |
| 2023 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 2,807,830 | 3,336,067 | 3,012,968 | 3,392,774 | 3,277,654 | 3,314,353 | 3,696,192 |
| 2024 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 2,398,028 | 1,654,941 | 2,528,161 | 3,252,601 | 3,576,960 | 3,585,753 | 1,856,677 | 655,149 |
| 2025 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,685,200 | 3,576,960 | 3,637,320 | 3,006,121 | 3,565,045 | 3,696,192 | 3,576,960 | 3,696,192 |
| 2026 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 | 3,696,192 | 3,576,960 | 3,696,192 | 3,102,327 | 3,475,167 |
| 2027 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 | 3,696,192 | 3,576,960 | 3,696,192 | 3,576,960 | 3,696,192 |
| 2028 | 3,696,192 | 3,338,496 | 3,696,192 | 3,576,960 | 3,514,034 | 2,860,837 | 3,514,080 | 3,622,320 | 3,576,960 | 3,696,192 | 3,576,960 | 2,141,276 |

3. Energía mensual y anual generada en la minicentral en kWh

Tabla de energía generada en la minicentral (kWh)

| AÑO | ENE | FEB | MAR | ABR | MAY | JUN | JUL | AGO | SET | OCT | NOV | DIC |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1965 | 3,532,795 | 3,856,884 | 4,270,122 | 4,132,376 | 3,790,746 | 3,305,056 | 4,270,122 | 4,224,329 | 4,132,376 | 4,174,174 | 3,714,173 | 4,270,122 |
| 1966 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,063,046 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 1967 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,233,694 | 2,838,124 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,023,152 |
| 1968 | 4,270,122 | 3,324,160 | 4,270,122 | 4,132,376 | 2,319,527 | 2,654,413 | 3,142,197 | 3,757,652 | 4,132,376 | 3,240,820 | 3,492,189 | 2,867,393 |
| 1969 | 2,418,911 | 3,856,884 | 4,270,122 | 4,132,376 | 3,854,024 | 2,470,702 | 3,656,333 | 4,270,122 | 4,132,376 | 4,039,708 | 4,132,376 | 4,270,122 |
| 1970 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,070,519 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 1971 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,078,174 | 4,270,122 | 4,270,122 | 4,132,376 | 4,063,437 | 3,040,566 | 4,270,122 |
| 1972 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 3,048,220 | 4,270,122 |
| 1973 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 1974 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,031,407 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 3,446,261 | 3,939,401 |
| 1975 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,158,354 | 4,073,940 | 3,612,774 |
| 1976 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,395,257 | 3,963,354 | 4,270,122 | 4,270,122 | 4,132,376 | 3,739,136 | 2,719,071 | 4,270,122 |
| 1977 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,167,273 | 4,130,920 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 1978 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,577,182 | 3,274,438 | 3,640,514 | 4,270,122 | 4,132,376 | 4,270,122 | 3,239,586 | 4,270,122 |
| 1979 | 3,901,297 | 3,856,884 | 4,270,122 | 4,132,376 | 3,964,761 | 3,029,490 | 4,202,108 | 4,270,122 | 4,132,376 | 3,612,580 | 2,543,015 | 882,503 |
| 1980 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,355,708 | 3,435,185 | 3,727,521 | 3,425,441 | 4,132,376 | 4,071,347 | 4,132,376 | 4,270,122 |
| 1981 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,067,588 | 4,132,376 | 4,270,122 | 4,248,058 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 1982 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,067,763 | 4,249,567 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 1983 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,774,926 | 4,132,376 | 3,790,799 | 4,066,133 | 4,132,376 | 3,683,768 | 2,657,834 | 4,270,122 |
| 1984 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 1985 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 3,414,835 | 3,530,462 | 4,270,122 |
| 1986 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 3,607,008 | 4,270,122 |
| 1987 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 2,928,580 | 2,531,939 | 4,051,822 | 4,058,223 | 4,132,376 | 3,984,339 | 3,737,137 | 4,270,122 |
| 1988 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 3,844,659 | 4,132,376 | 3,936,881 | 2,305,721 | 2,691,517 |
| 1989 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,442,840 | 4,270,122 | 3,781,381 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 1990 | 4,270,122 | 3,856,884 | 4,270,122 | 3,867,834 | 1,528,549 | 4,132,376 | 3,205,476 | 3,781,381 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 1991 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,932,736 | 4,270,122 | 3,915,847 | 4,132,376 | 4,270,122 | 3,737,137 | 2,649,642 |
| 1992 | 4,270,122 | 2,537,444 | 4,270,122 | 4,132,376 | 2,707,106 | 2,218,099 | 3,347,852 | 3,789,291 | 3,781,807 | 4,270,122 | 2,435,850 | 1,770,260 |
| 1993 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,136,654 | 4,075,552 | 4,161,051 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 1994 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,095,076 | 4,132,376 | 4,270,122 |
| 1995 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,972,671 | 3,335,675 | 4,162,559 | 4,270,122 | 4,132,376 | 3,849,873 | 4,132,376 | 4,270,122 |
| 1996 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,680,133 | 4,115,100 | 4,270,122 | 4,132,376 | 3,944,790 | 3,943,812 | 3,411,772 |
| 1997 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,735,378 | 4,062,864 | 4,270,122 | 4,270,122 | 4,132,376 | 4,015,978 | 4,132,376 | 4,270,122 |
| 1998 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,059,679 | 3,213,201 | 4,270,122 | 4,208,509 | 4,132,376 | 4,229,543 | 3,721,827 | 2,733,392 |
| 1999 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,225,837 | 4,270,122 | 4,132,376 | 4,270,122 | 3,170,694 | 4,270,122 |
| 2000 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 2001 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,166,264 | 4,132,376 | 4,140,403 |
| 2002 | 3,993,423 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,113,691 | 4,270,122 | 4,270,122 | 4,132,376 | 4,245,362 | 4,132,376 | 4,270,122 |
| 2003 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,350,984 | 3,988,544 | 3,480,809 | 4,132,376 | 4,270,122 | 2,137,320 | 4,270,122 |
| 2004 | 2,661,788 | 3,856,884 | 4,270,122 | 4,132,376 | 3,403,167 | 2,417,119 | 4,270,122 | 3,544,088 | 3,911,936 | 3,881,512 | 4,132,376 | 4,270,122 |
| 2005 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,735,378 | 2,891,706 | 3,513,957 | 3,354,253 | 3,644,024 | 2,869,060 | 2,083,737 | 3,562,523 |
| 2006 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,664,824 | 4,270,122 | 4,270,122 | 4,132,376 | 4,063,437 | 4,132,376 | 4,270,122 |
| 2007 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 3,783,064 | 3,127,020 |
| 2008 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,600,911 | 2,623,794 | 4,091,371 | 4,224,329 | 3,758,843 | 2,821,601 | 2,742,035 | 3,587,649 |
| 2009 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,534,695 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 2010 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 3,715,407 | 4,132,376 | 4,270,122 |
| 2011 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 2012 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,174,928 | 4,162,559 | 3,670,644 | 4,132,376 | 3,944,790 | 3,469,225 | 4,270,122 |
| 2013 | 2,971,665 | 3,856,884 | 4,270,122 | 4,132,376 | 4,265,333 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 2014 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,248,058 | 4,132,376 | 3,865,693 | 2,864,509 | 4,270,122 |
| 2015 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,052,454 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 3,607,008 | 3,780,275 |
| 2016 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,079,257 | 2,749,690 | 2,515,641 |
| 2017 | 2,871,165 | 3,856,884 | 4,270,122 | 4,132,376 | 3,142,144 | 3,106,036 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 3,614,663 | 3,235,896 |
| 2018 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,656,280 | 2,531,939 | 3,229,205 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 2019 | 3,675,171 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,182,582 | 3,743,341 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 2020 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 3,917,303 | 4,039,900 | 4,270,122 | 3,907,938 | 4,132,376 | 3,818,234 | 4,132,376 | 4,270,122 |
| 2021 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 3,217,090 | 4,132,376 | 4,270,122 |
| 2022 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 2023 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 3,243,819 | 3,854,078 | 3,480,809 | 3,919,590 | 3,786,595 | 3,828,992 | 4,270,122 |
| 2024 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 2,770,384 | 1,911,914 | 2,920,723 | 3,757,652 | 4,132,376 | 4,142,535 | 2,144,974 | 756,877 |
| 2025 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,257,423 | 4,132,376 | 4,202,108 | 3,472,900 | 4,118,611 | 4,270,122 | 4,132,376 | 4,270,122 |
| 2026 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 3,584,044 | 4,014,777 |
| 2027 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 | 4,270,122 | 4,132,376 | 4,270,122 | 4,132,376 | 4,270,122 |
| 2028 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 4,059,679 | 3,305,056 | 4,059,732 | 4,184,780 | 4,132,376 | 4,270,122 | 4,132,376 | 2,473,765 |
| 2029 | 4,270,122 | 3,856,884 | 4,270,122 | 4,132,376 | 1,797,481 | 3,090,727 | 3,426,949 | 4,074,043 | 4,132,376 | 3,699,587 | 4,132,376 | 4,270,122 |

4. Ingresos anuales del proyecto

Tabla de ingresos del proyecto (s/.)

| AÑO | ENERGÍA (GWh) | INGRESOS (s/.) | TOTAL |
|------|---------------|----------------|--------------|
| 2015 | - | - | - |
| 2016 | - | - | - |
| 2017 | - | - | - |
| 2018 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2019 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2020 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2021 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2022 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2023 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2024 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2025 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2026 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2027 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2028 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2029 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2030 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2031 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2032 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2033 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2034 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2035 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2036 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2037 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2038 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2039 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2040 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2041 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2042 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2043 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2044 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2045 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2046 | 47.77 | 8,806,770.67 | 8,806,770.67 |
| 2047 | 47.77 | 8,806,770.67 | 8,806,770.67 |

5. Egresos anuales del proyecto

Tabla de egresos del proyecto (s/.)

| AÑO | INVERSIÓN | PERSONAL | REPUESTOS Y CONSUMIBLES | OTROS COSTOS INDIRECTOS | OSINERGMIN DGE COES | CANON DE AGUA | TOTAL EGRESOS |
|------|------------|----------|----------------------------|----------------------------|------------------------|------------------|------------------|
| 2015 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2016 | 12,197,041 | 0 | 0 | 0 | 0 | 0 | 12,197,041 |
| 2017 | 28,459,763 | 0 | 0 | 0 | 0 | 0 | 28,459,763 |
| 2018 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2019 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2020 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2021 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2022 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2023 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2024 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2025 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2026 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2027 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2028 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2029 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2030 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2031 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2032 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2033 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2034 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2035 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2036 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2037 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2038 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2039 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2040 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2041 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2042 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2043 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2044 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2045 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2046 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |
| 2047 | 0 | 42,902 | 39,120 | 554,979 | 88,068 | 88,068 | 813,136 |

Para los egresos anuales del proyecto, se contempló gastos personal fijo, repuesto y combustible, pago al COES, Osinergmin y DGE (1% del ingreso anual) y Canon de agua (1% del ingreso por energía anual) según lo indica la LCE (Ley de Concesiones Eléctricas). Los valores de personal fijo, repuestos y combustibles fueron obtenidos de proyectos similares de minicentrales hidroeléctricas realizados por empresas peruanas.

6. Flujo económico

Tabla de flujo económico

| AÑO | TOTAL | TOTAL | FLUJO |
|------|-----------|------------|-------------|
| | INGRESOS | EGRESOS | ECONÓMICO |
| 2017 | 0 | 12,197,041 | -12,197,041 |
| 2018 | 0 | 28,459,763 | -28,459,763 |
| 2019 | 8,806,771 | 813,136 | 7,993,635 |
| 2020 | 8,806,771 | 813,136 | 7,993,635 |
| 2021 | 8,806,771 | 813,136 | 7,993,635 |
| 2022 | 8,806,771 | 813,136 | 7,993,635 |
| 2023 | 8,806,771 | 813,136 | 7,993,635 |
| 2024 | 8,806,771 | 813,136 | 7,993,635 |
| 2025 | 8,806,771 | 813,136 | 7,993,635 |
| 2026 | 8,806,771 | 813,136 | 7,993,635 |
| 2027 | 8,806,771 | 813,136 | 7,993,635 |
| 2028 | 8,806,771 | 813,136 | 7,993,635 |
| 2029 | 8,806,771 | 813,136 | 7,993,635 |
| 2030 | 8,806,771 | 813,136 | 7,993,635 |
| 2031 | 8,806,771 | 813,136 | 7,993,635 |
| 2032 | 8,806,771 | 813,136 | 7,993,635 |
| 2033 | 8,806,771 | 813,136 | 7,993,635 |
| 2034 | 8,806,771 | 813,136 | 7,993,635 |
| 2035 | 8,806,771 | 813,136 | 7,993,635 |
| 2036 | 8,806,771 | 813,136 | 7,993,635 |
| 2037 | 8,806,771 | 813,136 | 7,993,635 |
| 2038 | 8,806,771 | 813,136 | 7,993,635 |
| 2039 | 8,806,771 | 813,136 | 7,993,635 |
| 2040 | 8,806,771 | 813,136 | 7,993,635 |
| 2041 | 8,806,771 | 813,136 | 7,993,635 |
| 2042 | 8,806,771 | 813,136 | 7,993,635 |
| 2043 | 8,806,771 | 813,136 | 7,993,635 |
| 2044 | 8,806,771 | 813,136 | 7,993,635 |
| 2045 | 8,806,771 | 813,136 | 7,993,635 |
| 2046 | 8,806,771 | 813,136 | 7,993,635 |
| 2047 | 8,806,771 | 813,136 | 7,993,635 |
| 2048 | 8,806,771 | 813,136 | 7,993,635 |

El flujo económico es igual al total de ingresos menos el total de egresos

7. Indicadores económicos

Tabla de indicadores económicos para diferentes tasas

| ANÁLISIS ECONÓMICO | | | | |
|--------------------|----------------|----------------|----------------|--------------|
| TASA | VANB (US\$) | VANC (US\$) | VANE (US\$) | B/C (ECO) |
| 9% | 76,153,282.67 | 42,175,252.54 | 33,978,030.12 | 1.81 |
| 10% | 68,612,127.17 | 40,943,697.06 | 27,668,430.10 | 1.68 |
| 11% | 62,141,252.72 | 39,824,459.04 | 22,316,793.68 | 1.56 |
| 12% | 56,553,059.58 | 38,799,753.42 | 17,753,306.16 | 1.46 |
| 13% | 51,697,471.13 | 37,855,279.69 | 13,842,191.44 | 1.37 |
| 14% | 47,453,721.87 | 36,979,462.63 | 10,474,259.24 | 1.28 |
| 15% | 43,724,065.72 | 36,162,870.43 | 7,561,195.29 | 1.21 |
| 16% | 40,428,931.76 | 35,397,766.48 | 5,031,165.28 | 1.14 |
| 17% | 37,503,175.93 | 34,677,762.46 | 2,825,413.47 | 1.08 |
| 18% | 34,893,166.38 | 33,997,548.40 | 895,617.98 | 1.03 |
| 19% | 32,554,505.94 | 33,352,681.61 | (798,175.67) | 0.98 |
| 20% | 30,450,243.79 | 32,739,420.88 | (2,289,177.09) | 0.93 |
| 21% | 28,549,464.35 | 32,154,595.50 | (3,605,131.15) | 0.89 |
| 22% | 26,826,168.38 | 31,595,501.31 | (4,769,332.93) | 0.85 |
| | TIR | 18.51% | | |

Evaluación financiera para el $Q=1.38m^3/s$

Tabla de flujo financiero (s/.)

| CUOTA | INTERÉS | AMORTIZACIÓN | SALDO | FLUJO FINANCIERO |
|-----------|-----------|--------------|------------|------------------|
| 0 | 0 | 0 | 0 | -12,197,041 |
| 0 | 0 | 0 | 0 | -16,262,722 |
| 1,514,185 | 1,463,645 | 50,540 | 12,146,501 | 6,479,449 |
| 1,514,185 | 1,457,580 | 56,605 | 12,089,896 | 6,479,449 |
| 1,514,185 | 1,450,788 | 63,398 | 12,026,498 | 6,479,449 |
| 1,514,185 | 1,443,180 | 71,006 | 11,955,492 | 6,479,449 |
| 1,514,185 | 1,434,659 | 79,526 | 11,875,966 | 6,479,449 |
| 1,514,185 | 1,425,116 | 89,069 | 11,786,897 | 6,479,449 |
| 1,514,185 | 1,414,428 | 99,758 | 11,687,139 | 6,479,449 |
| 1,514,185 | 1,402,457 | 111,729 | 11,575,411 | 6,479,449 |
| 1,514,185 | 1,389,049 | 125,136 | 11,450,274 | 6,479,449 |
| 1,514,185 | 1,374,033 | 140,152 | 11,310,122 | 6,479,449 |
| 1,514,185 | 1,357,215 | 156,971 | 11,153,151 | 6,479,449 |
| 1,514,185 | 1,338,378 | 175,807 | 10,977,344 | 6,479,449 |
| 1,514,185 | 1,317,281 | 196,904 | 10,780,440 | 6,479,449 |
| 1,514,185 | 1,293,653 | 220,533 | 10,559,908 | 6,479,449 |
| 1,514,185 | 1,267,189 | 246,996 | 10,312,911 | 6,479,449 |
| 1,514,185 | 1,237,549 | 276,636 | 10,036,275 | 6,479,449 |
| 1,514,185 | 1,204,353 | 309,832 | 9,726,443 | 6,479,449 |
| 1,514,185 | 1,167,173 | 347,012 | 9,379,431 | 6,479,449 |
| 1,514,185 | 1,125,532 | 388,654 | 8,990,777 | 6,479,449 |
| 1,514,185 | 1,078,893 | 435,292 | 8,555,485 | 6,479,449 |
| 1,514,185 | 1,026,658 | 487,527 | 8,067,958 | 6,479,449 |
| 1,514,185 | 968,155 | 546,030 | 7,521,927 | 6,479,449 |
| 1,514,185 | 902,631 | 611,554 | 6,910,373 | 6,479,449 |
| 1,514,185 | 829,245 | 684,941 | 6,225,433 | 6,479,449 |
| 1,514,185 | 747,052 | 767,133 | 5,458,299 | 6,479,449 |
| 1,514,185 | 654,996 | 859,189 | 4,599,110 | 6,479,449 |
| 1,514,185 | 551,893 | 962,292 | 3,636,818 | 6,479,449 |
| 1,514,185 | 436,418 | 1,077,767 | 2,559,050 | 6,479,449 |
| 1,514,185 | 307,086 | 1,207,099 | 1,351,951 | 6,479,449 |
| 1,514,185 | 162,234 | 1,351,951 | -0 | 6,479,449 |

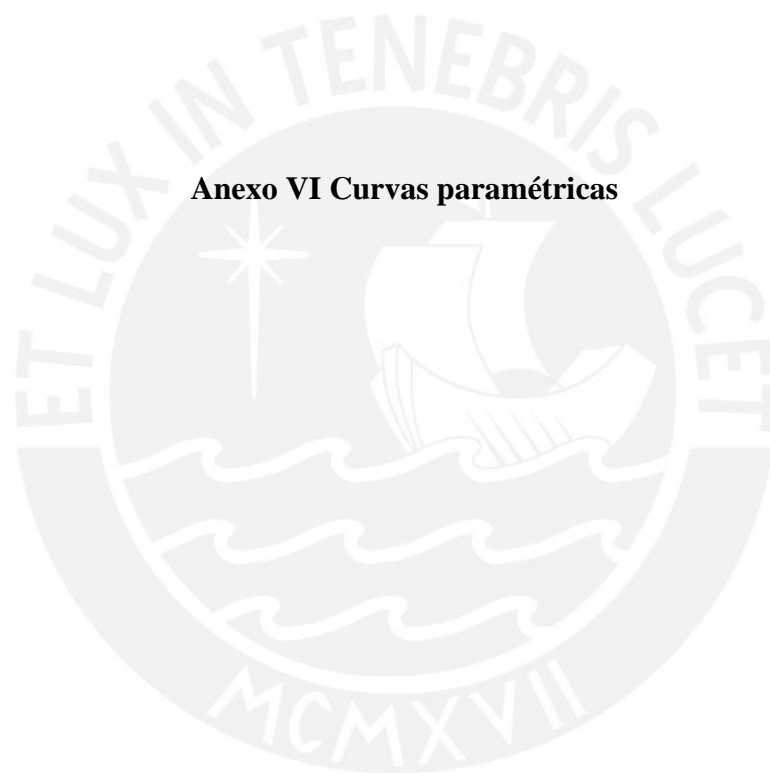
Tabla de indicadores financieros para diferentes tasas

| ANÁLISIS FINANCIERO | | | |
|---------------------|---------------|--------------------|-------|
| VANF | VANC(fin) | VANC (fin+egresos) | B/C |
| (US\$) | (US\$) | (US\$) | (FIN) |
| 31,150,679.85 | 13,093,356.05 | 45,002,602.82 | 1.69 |
| 25,951,856.38 | 11,796,773.28 | 42,660,270.79 | 1.61 |
| 21,531,977.68 | 10,684,208.46 | 40,609,275.04 | 1.53 |
| 17,753,306.16 | 9,723,406.78 | 38,799,753.42 | 1.46 |
| 14,505,699.10 | 8,888,564.91 | 37,191,772.04 | 1.39 |
| 11,700,567.44 | 8,158,919.15 | 35,753,154.43 | 1.33 |
| 9,266,247.36 | 7,517,663.59 | 34,457,818.36 | 1.27 |
| 7,144,436.73 | 6,951,117.27 | 33,284,495.03 | 1.21 |
| 5,287,437.85 | 6,448,079.69 | 32,215,738.09 | 1.16 |
| 3,656,013.54 | 5,999,329.71 | 31,237,152.84 | 1.12 |
| 2,217,711.98 | 5,597,233.92 | 30,336,793.96 | 1.07 |
| 945,551.36 | 5,235,439.23 | 29,504,692.43 | 1.03 |
| (183,017.90) | 4,908,630.18 | 28,732,482.25 | 0.99 |
| (1,186,935.97) | 4,612,336.61 | 28,013,104.35 | 0.96 |
| | TIR | 20.83% | |

Análisis de sensibilidad para el $Q=1.38m^3/s$

| | VARIACIÓN | s/. | INVERSIÓN TOTAL (s/.) | | | | | | | | |
|---|------------------|------------------|-----------------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | | | 32,656,805 | 34,656,805 | 36,656,805 | 38,656,805 | 40,656,805 | 42,656,805 | 44,656,805 | 46,656,805 | 48,656,805 |
| I N G R E S O S A N U A L E S | -0.1 | S/. 7,926,093.61 | 20.44 | 19.3 | 18.28 | 17.35 | 16.5 | 15.72 | 15.01 | 14.35 | 13.74 |
| | -0.08 | S/. 8,102,229.02 | 20.93 | 19.77 | 18.72 | 17.77 | 16.91 | 16.12 | 15.39 | 14.72 | 14.1 |
| | -0.06 | S/. 8,278,364.43 | 21.42 | 20.23 | 19.16 | 18.19 | 17.31 | 16.5 | 15.76 | 15.08 | 14.45 |
| | -0.04 | S/. 8,454,499.85 | 21.9 | 20.69 | 19.6 | 18.61 | 17.71 | 16.89 | 16.14 | 15.44 | 14.8 |
| | -0.02 | S/. 8,630,635.26 | 22.38 | 21.14 | 20.03 | 19.03 | 18.11 | 17.28 | 16.51 | 15.8 | 15.14 |
| | 0 | S/. 8,806,770.67 | 22.86 | 21.6 | 20.47 | 19.44 | 18.51 | 17.66 | 16.88 | 16.16 | 15.49 |
| | 1.02 | S/. 8,982,906.09 | 23.34 | 22.05 | 20.9 | 19.86 | 18.91 | 18.04 | 17.25 | 16.51 | 15.83 |
| | 1.04 | S/. 9,159,041.50 | 23.81 | 22.51 | 21.33 | 20.27 | 19.31 | 18.42 | 17.61 | 16.87 | 16.18 |
| | 1.06 | S/. 9,335,176.91 | 24.29 | 22.96 | 21.76 | 20.68 | 19.7 | 18.8 | 17.98 | 17.22 | 16.52 |
| | 1.08 | S/. 9,511,312.33 | 24.76 | 23.41 | 22.19 | 21.09 | 20.09 | 19.18 | 18.34 | 17.57 | 16.86 |
| 1.1 | S/. 9,687,447.74 | 25.23 | 23.86 | 22.62 | 21.50 | 20.49 | 19.56 | 18.71 | 17.92 | 17.2 | |





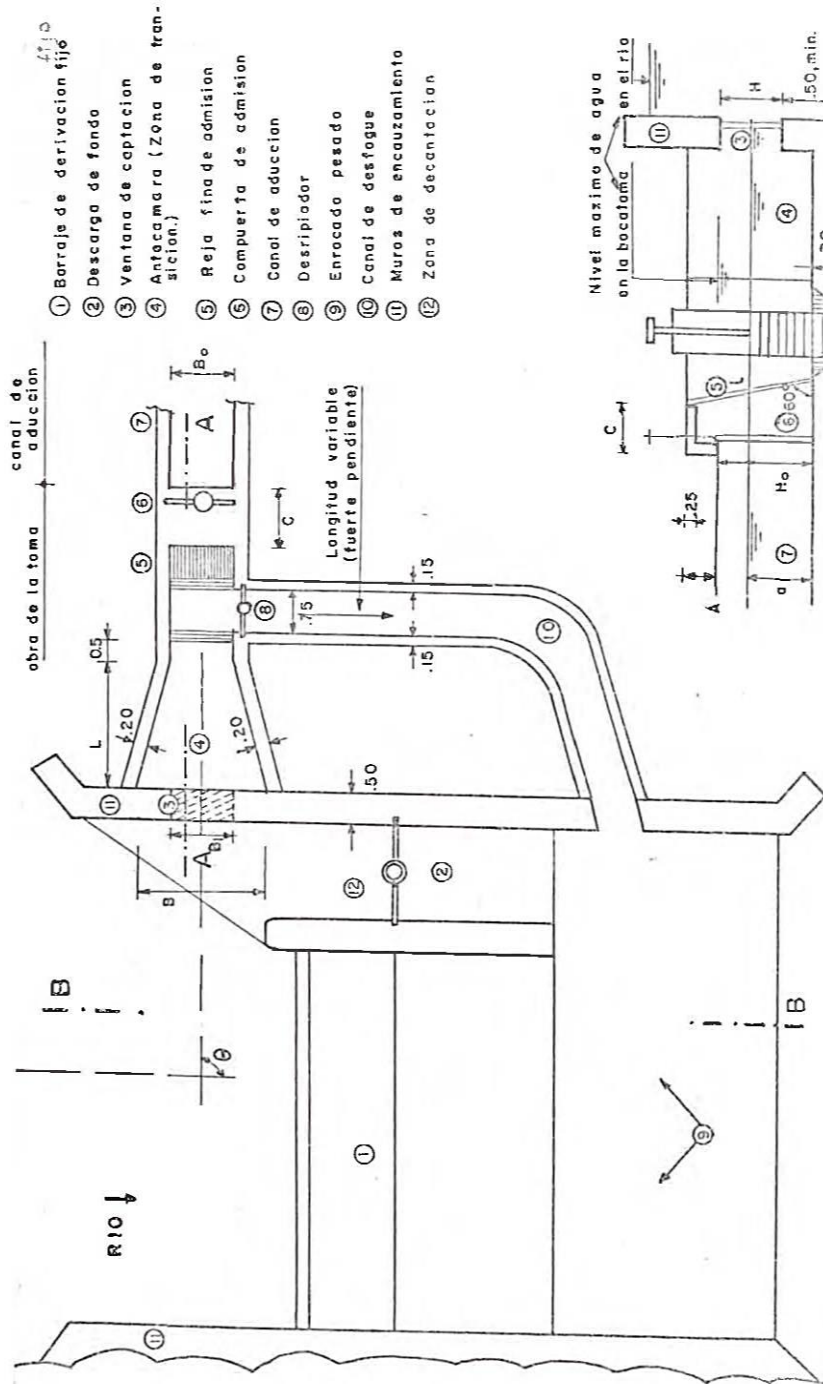
Para las obras bocatoma, canal de aducción, desarenador, cámara de carga, canal de descarga, se emplearon las curvas paramétricas presentadas en la tesis Planeamiento para el diseño de pequeñas centrales hidroeléctricas en el Perú, aplicación a la pequeña central de Cutervo (1982). Dichas curvas paramétricas se muestran a continuación:

BOCATOMA:

TABLA N° 5.4.1.

DIMENSIONAMIENTO DE BOCATOMA

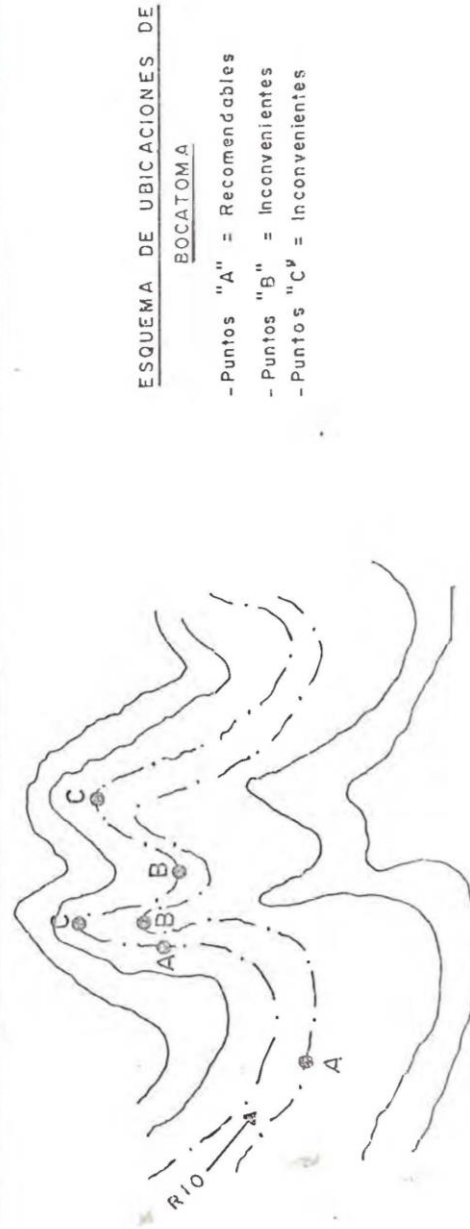
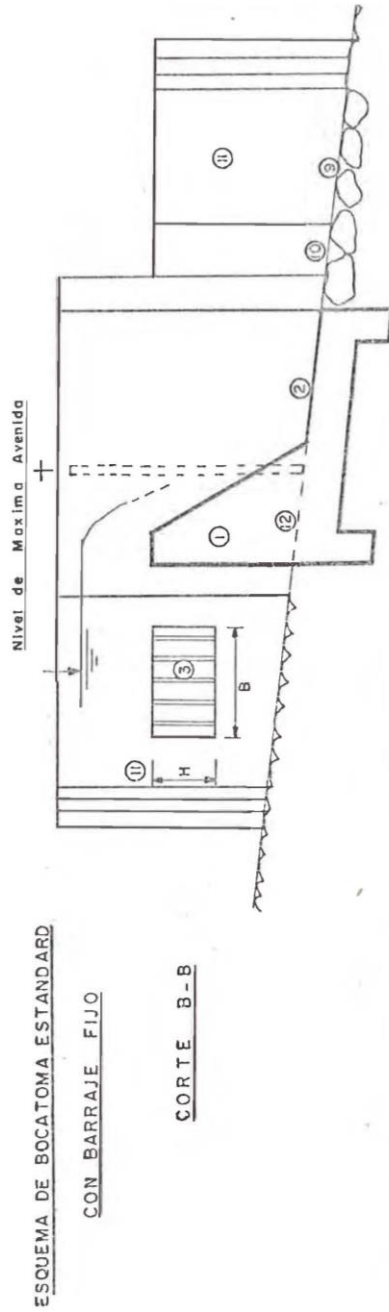
| Q (m ³ /sg) | DI A | M Bo | E B | N L | S Ho | I H | O A | N C | E L | S B ₁ |
|---------------------------|---------|---------|--------|--------|---------|--------|--------|--------|--------|---------------------|
| 0.1 | 0.29 | 0.50 | 1.00 | 1.00 | 0.40 | 0.30 | 0.15 | 0.50 | 1.00 | 0.50 |
| 0.2 | 0.38 | 0.65 | 1.30 | 1.30 | 0.50 | 0.40 | 0.20 | 0.65 | 1.30 | 0.65 |
| 0.3 | 0.44 | 0.75 | 1.50 | 1.50 | 0.60 | 0.45 | 0.25 | 0.75 | 1.50 | 0.75 |
| 0.4 | 0.49 | 0.85 | 1.70 | 1.70 | 0.65 | 0.50 | 0.25 | 0.85 | 1.60 | 0.85 |
| 0.5 | 0.54 | 0.90 | 1.80 | 1.80 | 0.70 | 0.55 | 0.30 | 0.90 | 1.75 | 0.90 |
| 0.6 | 0.57 | 0.95 | 1.90 | 1.90 | 0.75 | 0.60 | 0.30 | 0.95 | 1.85 | 0.95 |
| 0.7 | 0.60 | 1.00 | 2.00 | 2.00 | 0.80 | 0.65 | 0.35 | 1.00 | 2.00 | 1.00 |
| 0.8 | 0.64 | 1.10 | 2.20 | 2.20 | 0.85 | 0.65 | 0.35 | 1.10 | 2.10 | 1.10 |
| 0.9 | 0.66 | 1.15 | 2.30 | 2.30 | 0.85 | 0.70 | 0.40 | 1.15 | 2.20 | 1.15 |
| 1.0 | 0.69 | 1.20 | 2.40 | 2.40 | 0.90 | 0.70 | 0.40 | 1.20 | 2.25 | 1.20 |
| 1.2 | 0.74 | 1.25 | 2.50 | 2.50 | 0.95 | 0.80 | 0.40 | 1.25 | 2.45 | 1.25 |
| 1.4 | 0.78 | 1.35 | 2.70 | 2.70 | 1.00 | 0.85 | 0.45 | 1.35 | 2.50 | 1.35 |
| 1.6 | 0.83 | 1.40 | 2.80 | 2.80 | 1.10 | 0.90 | 0.45 | 1.40 | 2.70 | 1.40 |
| 1.8 | 0.86 | 1.45 | 2.90 | 2.90 | 1.15 | 0.95 | 0.50 | 1.45 | (2.85) | 1.45 |
| 2.0 | 0.90 | 1.55 | 3.10 | 3.10 | 1.20 | 0.95 | 0.50 | 1.55 | (2.95) | 1.55 |
| 2.5 | 0.96 | 1.65 | 3.30 | 3.30 | 1.25 | 1.05 | 0.55 | 1.65 | (3.10) | 1.65 |
| 3.0 | 1.05 | 1.80 | 3.60 | 3.60 | 1.35 | 1.10 | 0.60 | 1.80 | (3.40) | 1.80 |
| 3.5 | 1.10 | 1.85 | 3.70 | 3.70 | 1.40 | 1.25 | 0.65 | 1.85 | (3.55) | 1.85 |
| 4.0 | 1.15 | 1.95 | 3.90 | 3.90 | 1.50 | 1.30 | 0.70 | 1.95 | (3.80) | 1.95 |
| 4.5 | 1.20 | 2.00 | 4.00 | 4.00 | 1.55 | 1.40 | 0.75 | 2.00 | (4.00) | 2.00 |
| 5.0 | 1.25 | 2.15 | 4.30 | 4.30 | 1.60 | 1.40 | 0.75 | 2.15 | (4.10) | 2.15 |
| 6.0 | 1.35 | 2.30 | 4.60 | 4.60 | 1.75 | 1.55 | 0.80 | 2.30 | (4.40) | 2.30 |
| 7.0 | 1.42 | 2.40 | 4.80 | 4.80 | 1.85 | 1.65 | 0.85 | 2.40 | (4.70) | 2.40 |
| 8.0 | 1.50 | 2.55 | 5.10 | 5.10 | 1.95 | 1.75 | 0.90 | 2.55 | (4.95) | 2.55 |
| 9.0 | 1.56 | 2.65 | 5.30 | 5.30 | 2.00 | 1.85 | 0.95 | 2.65 | (5.10) | 2.65 |
| 10.00 | 1.62 | 2.75 | 5.50 | 5.50 | 2.10 | 1.90 | 1.00 | 2.75 | (5.40) | 2.75 |



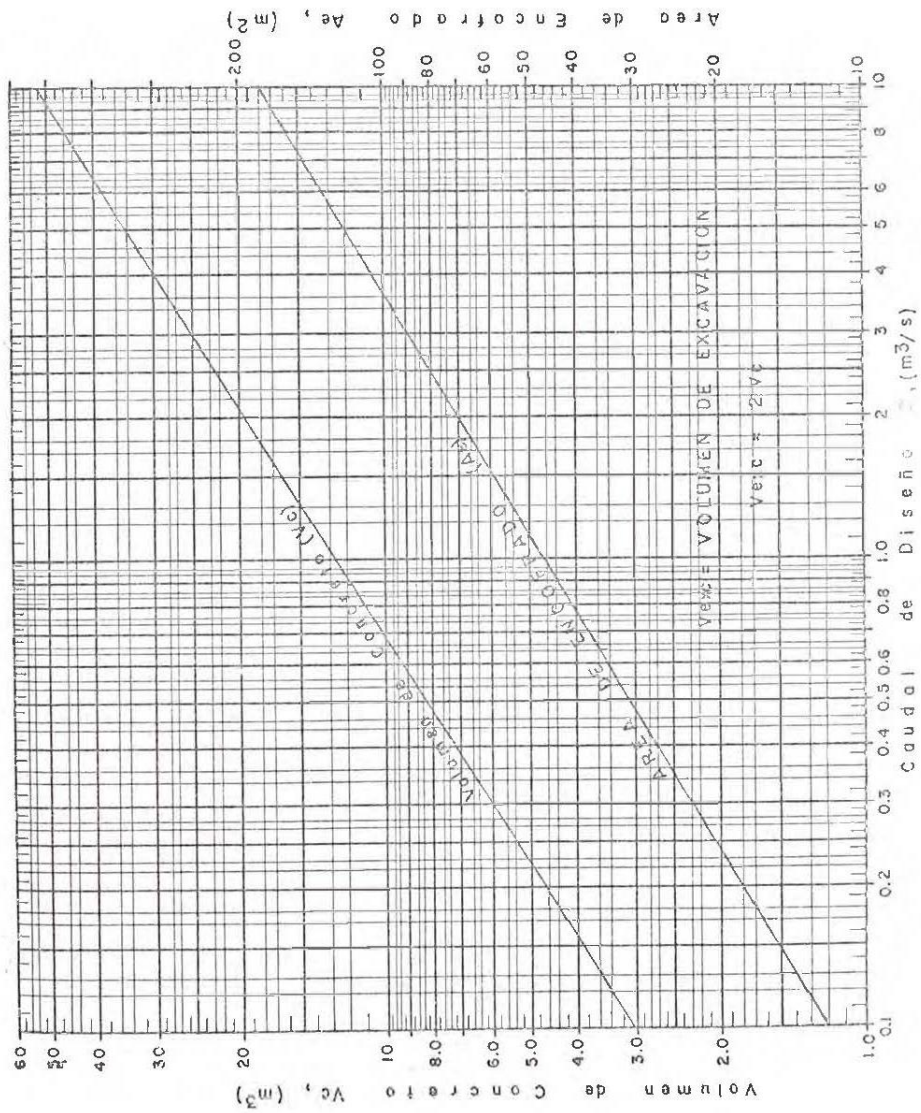
LAMINA 5.12

ESQUEMA DE BOCATOMA ESTANDARD
CON BARRAJE FIJO

CORTE A-A

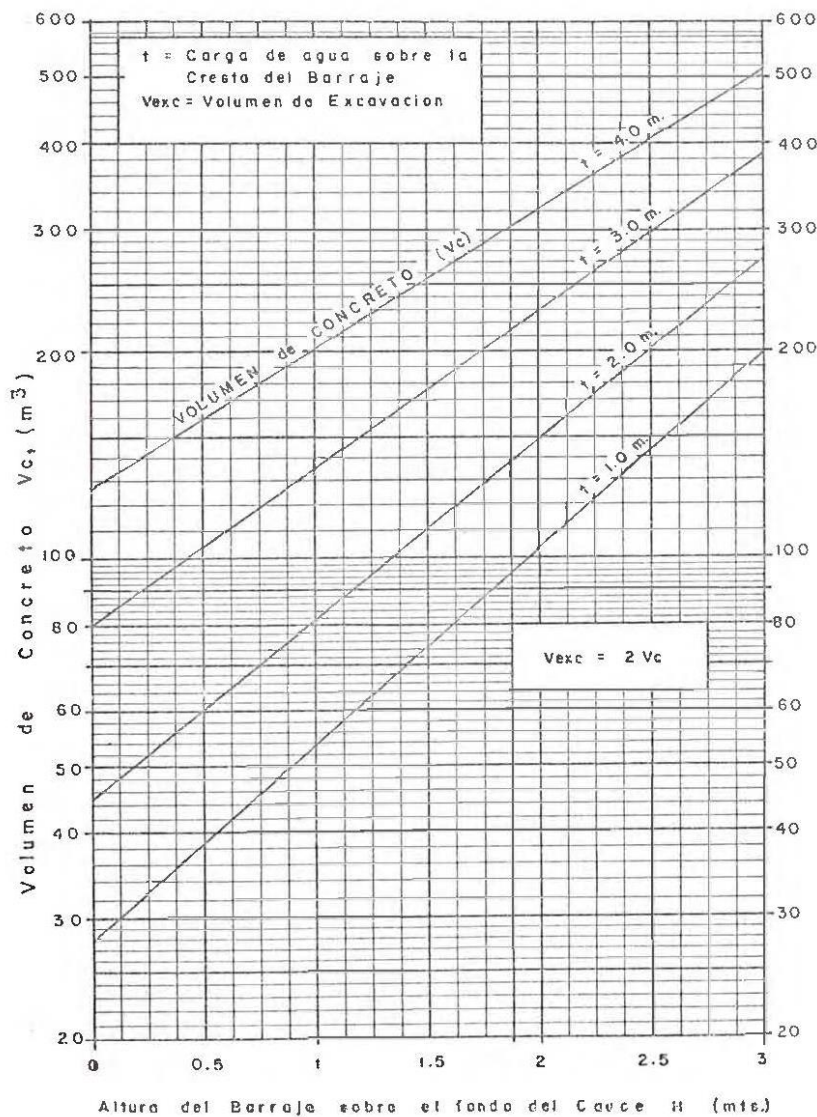


METRADO DE BOCATOMAS



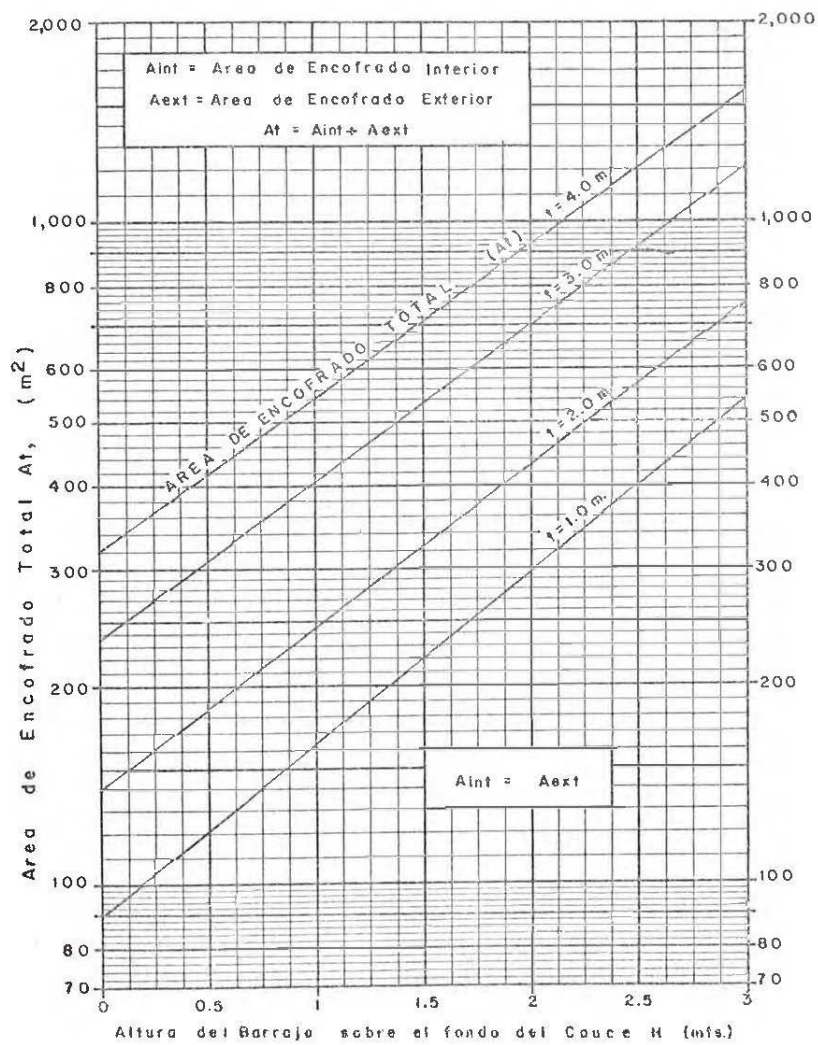
LAMINA 5.15

METRADO DEL MURO DE
ENCAUZAMIENTO

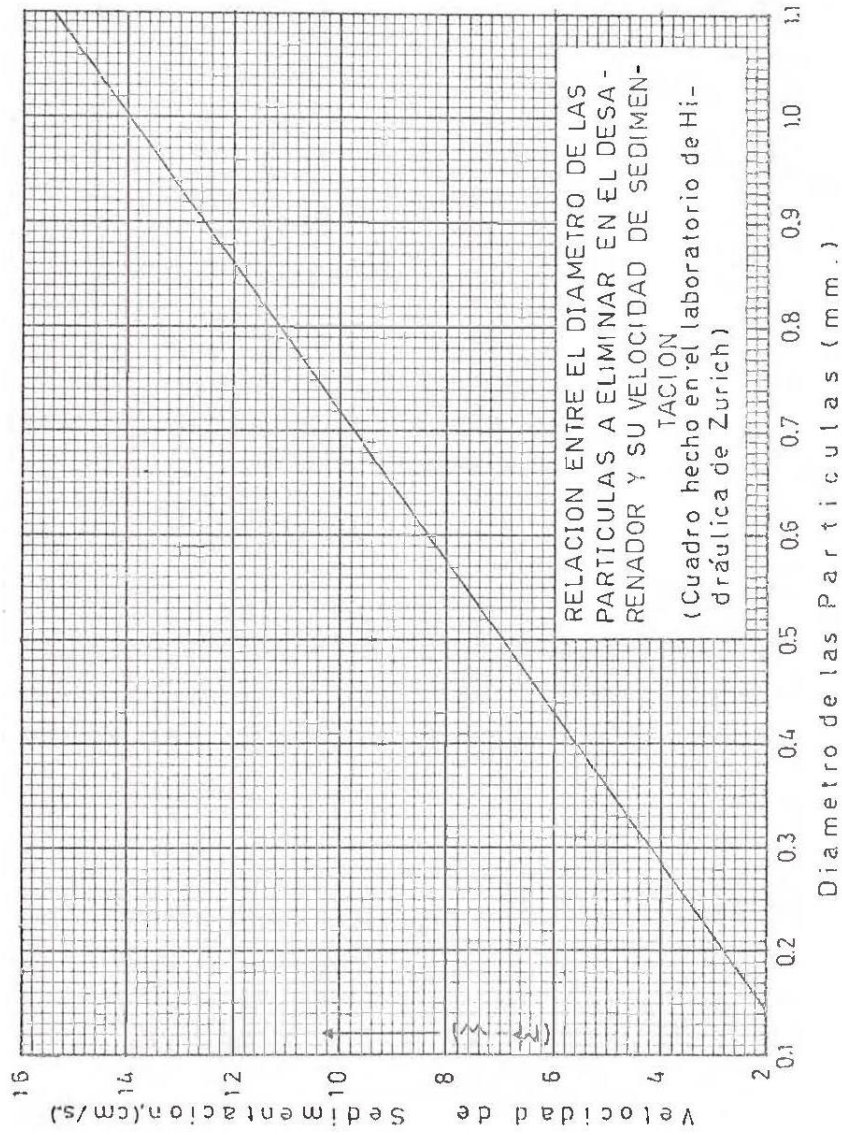


LAMINA 5.16

METRADO DEL MURO DE
ENCAUZAMIENTO



DESARENADOR:



LAMINA 5.23

METRADO DEL DESARENADOR
ESTANDAR

Diametro maximo de partícula a eliminar
en el DESARENADOR = 0.5 mm.

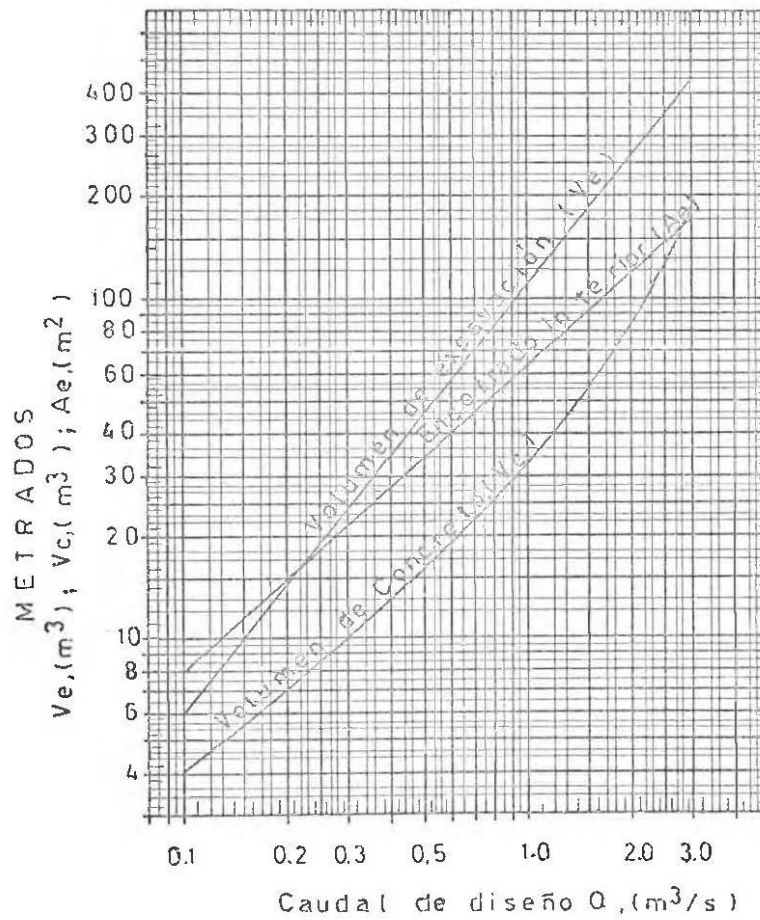
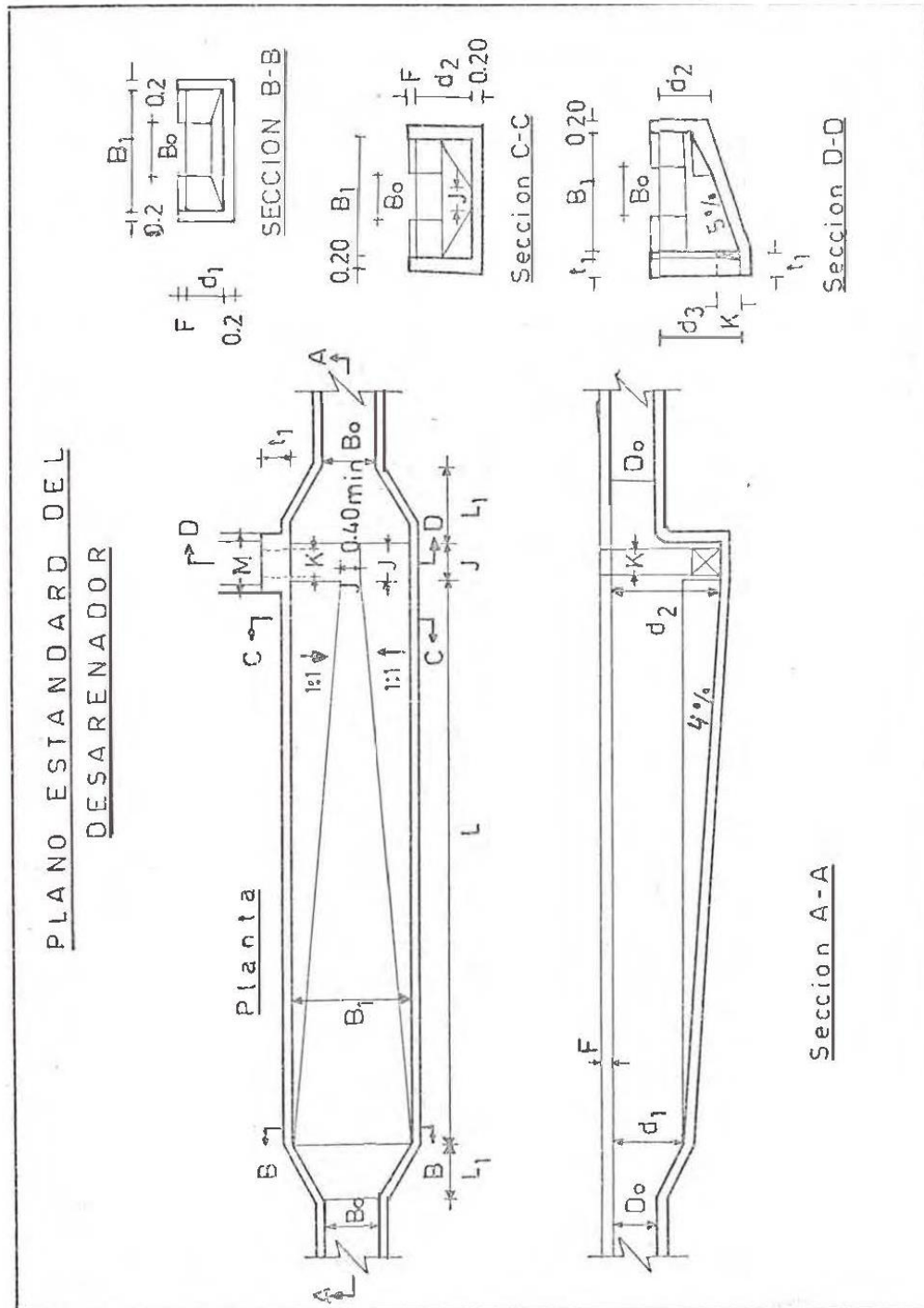


TABLA N° 5.4.4.

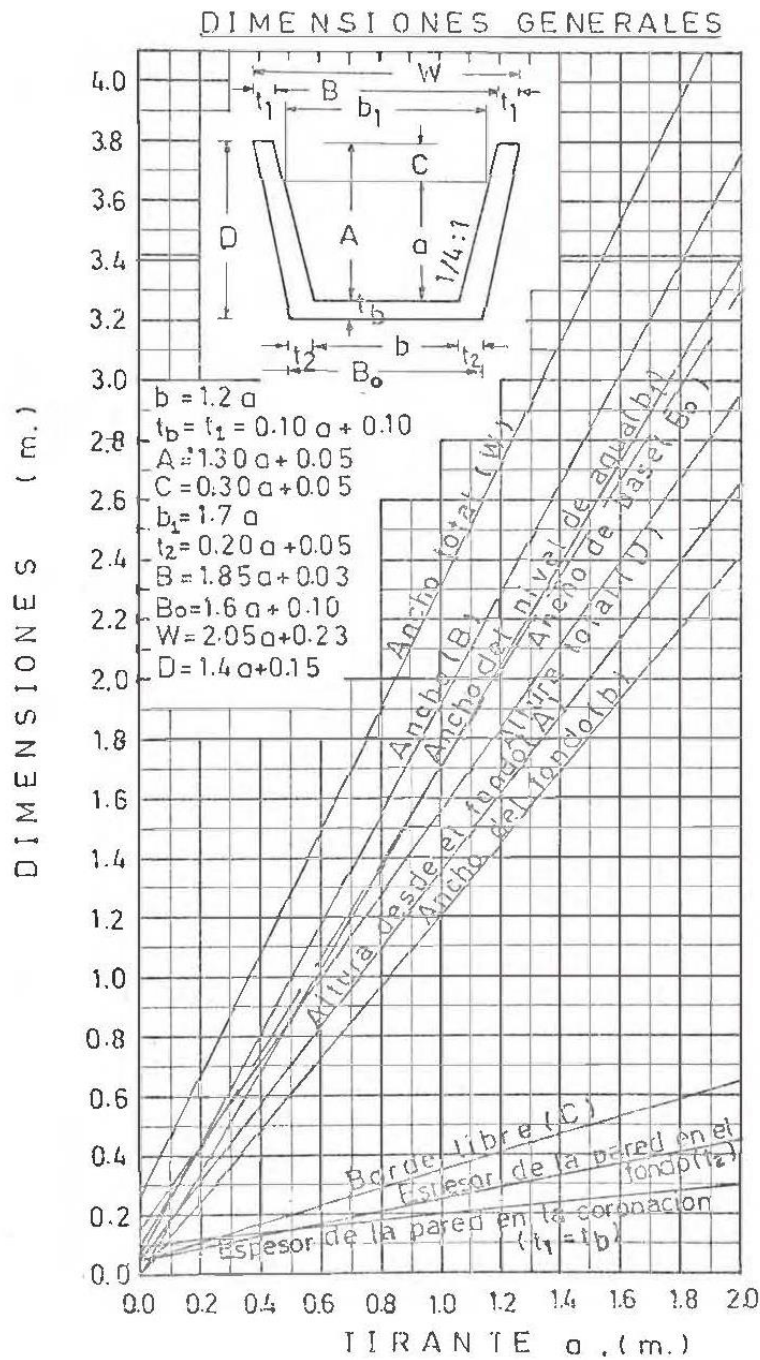
DIÁMETRO MÁXIMO DE PARTICULAS A ELIMINAR (\emptyset) = 0.5 mm.

| DIMENSIONES | Q (m ³ /seg) | | | | | | | | | | |
|----------------|-------------------------|------|------|------|------|-------|-------|-------|-------|--|--|
| | 0.1 | 0.2 | 0.4 | 0.6 | 0.8 | 1.0 | 1.5 | 2.0 | 3.0 | | |
| D ₀ | 0.29 | 0.38 | 0.50 | 0.57 | 0.65 | 0.69 | 0.80 | 0.90 | 1.05 | | |
| B ₀ | 0.50 | 0.65 | 0.85 | 0.97 | 1.11 | 1.17 | 1.36 | 1.53 | 1.79 | | |
| d ₁ | 0.45 | 0.60 | 0.85 | 1.05 | 1.20 | 1.35 | 1.60 | 1.85 | 2.25 | | |
| B ₁ | 0.90 | 1.20 | 1.70 | 2.10 | 2.40 | 2.70 | 3.20 | 3.70 | 4.50 | | |
| L | 3.20 | 4.80 | 6.70 | 8.20 | 9.50 | 10.60 | 13.40 | 15.45 | 19.00 | | |
| L ₁ | 0.80 | 1.10 | 1.70 | 2.25 | 2.60 | 3.00 | 3.70 | 4.30 | 5.40 | | |
| d ₂ | 0.60 | 0.80 | 1.10 | 1.40 | 1.60 | 1.80 | 2.15 | 2.45 | 3.00 | | |
| F | 0.20 | 0.20 | 0.20 | 0.25 | 0.25 | 0.25 | 0.30 | 0.30 | 0.30 | | |
| d ₃ | 0.63 | 0.83 | 1.15 | 1.45 | 1.66 | 1.87 | 2.23 | 2.55 | 3.12 | | |
| J | 0.40 | 0.55 | 0.70 | 0.80 | 0.90 | 0.90 | 1.00 | 1.10 | 1.25 | | |
| M | 0.60 | 0.75 | 0.90 | 1.00 | 1.10 | 1.20 | 1.40 | 1.50 | 1.70 | | |
| K | 0.30 | 0.40 | 0.45 | 0.50 | 0.55 | 0.60 | 0.70 | 0.75 | 0.85 | | |
| t ₁ | 0.40 | 0.45 | 0.55 | 0.60 | 0.60 | 0.70 | 0.75 | 0.85 | 0.95 | | |



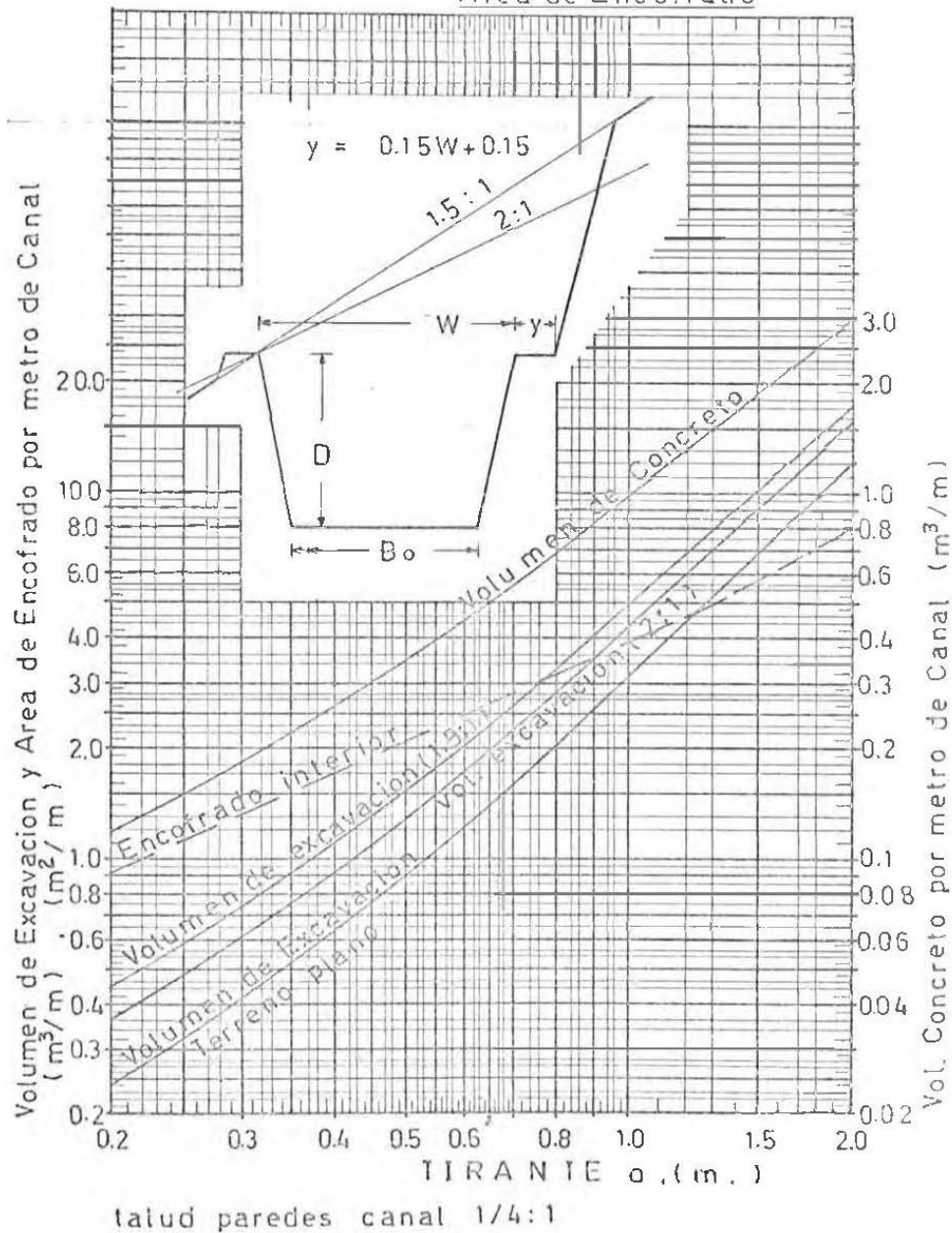
CANAL DE CONDUCCIÓN:

LAMINA 5.26.2

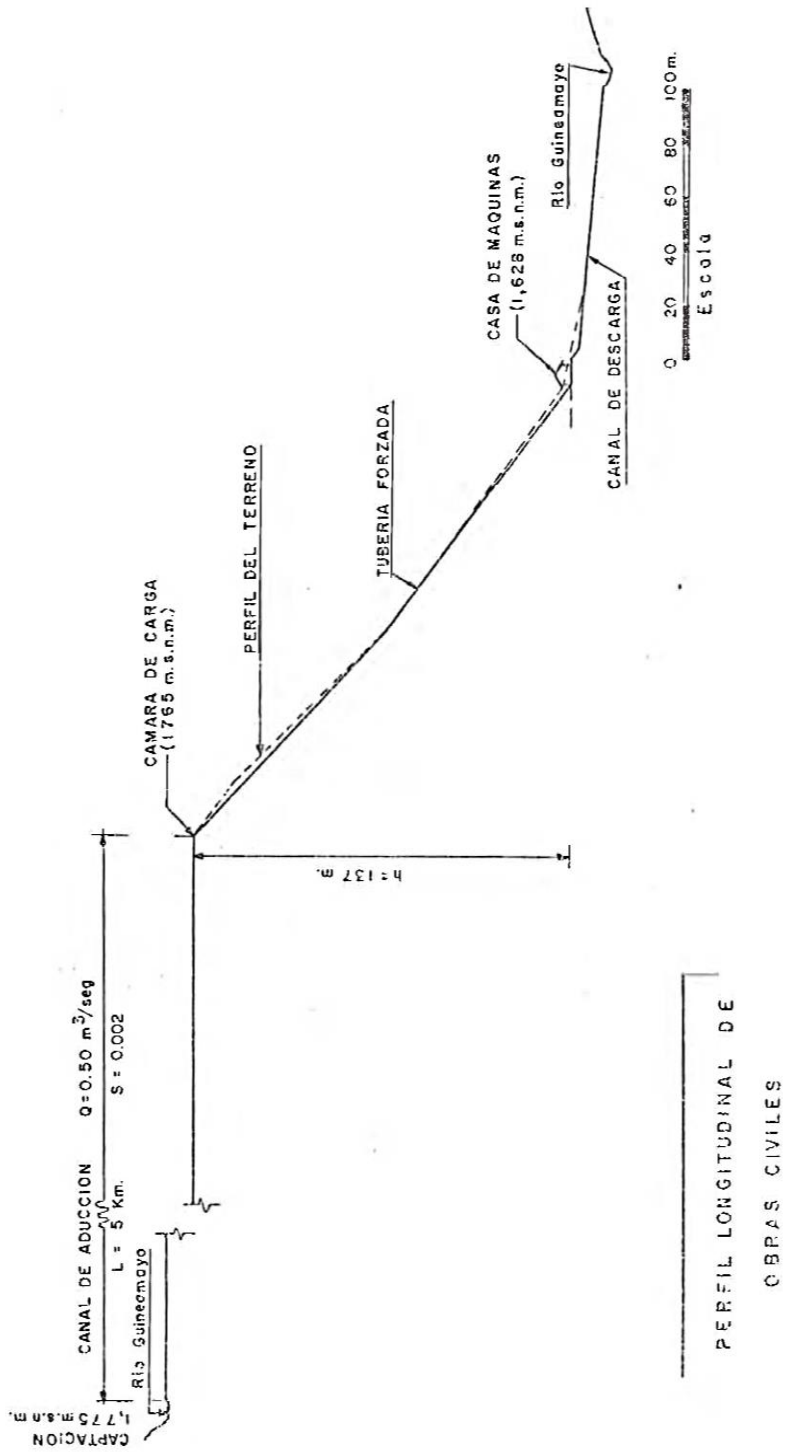


LAMINA 5.26.3

Volumen de Excavacion
Volumen de Concreto
Area de Encofrado



talud paredes canal 1/4:1



CÁMARA DE CARGA:

TABLA N° 5.4.6.

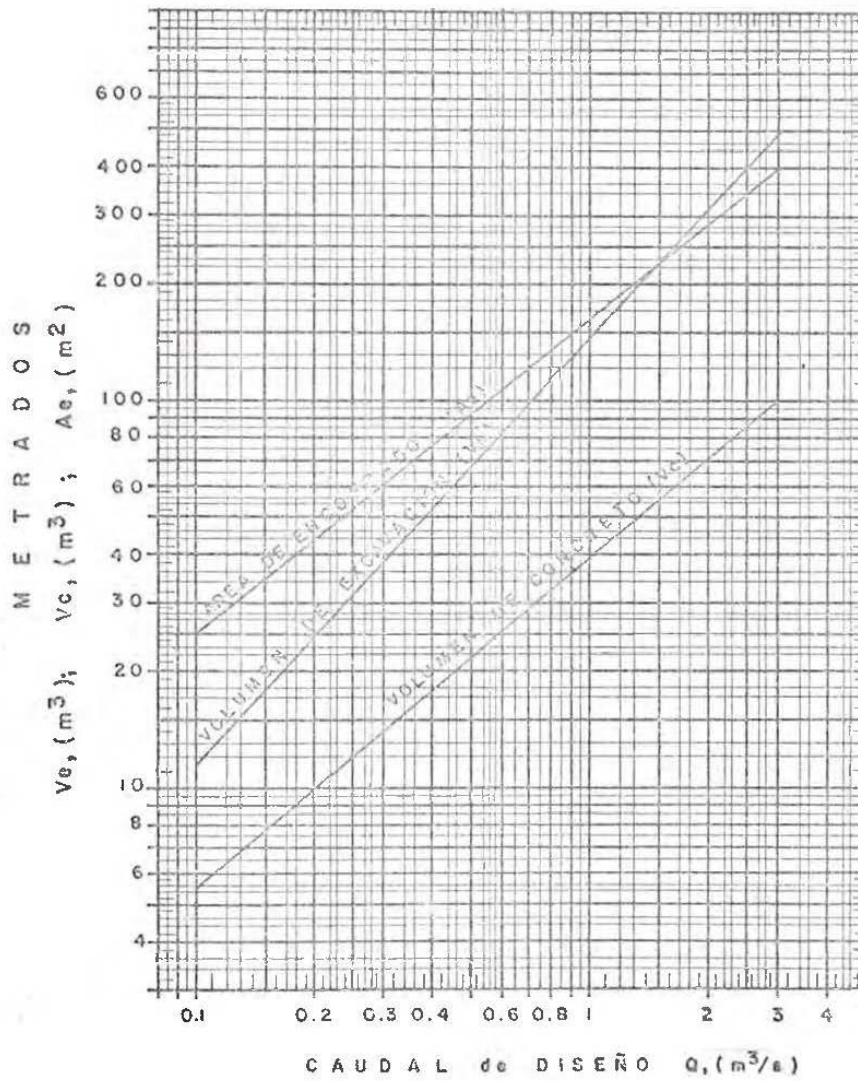
DIMENSIONES DE CAMARA DE CARGA STANDARD

| DIMEN- SIONES | Q diseño (m3/seg.) | | | | | | | | |
|------------------|--------------------|------|------|------|------|-------|--------|--------|--------|
| | 0.1 | 0.2 | 0.4 | 0.6 | 0.8 | 1.0 | 1.5 | 2.0 | 3.0 |
| D _o | 0.29 | 0.38 | 0.50 | 0.57 | 0.65 | 0.69 | 0.80 | 0.90 | 1.05 |
| B _o | 0.50 | 0.65 | 0.85 | 0.97 | 1.11 | 1.17 | 1.36 | 1.53 | 1.79 |
| d ₁ | 0.45 | 0.60 | 0.85 | 1.05 | 1.20 | 1.35 | 1.60 | 1.85 | 2.25 |
| B ₁ | 0.90 | 1.20 | 1.70 | 2.10 | 2.40 | 2.70 | 3.20 | 3.70 | 4.50 |
| L | 3.20 | 4.80 | 6.70 | 8.20 | 9.50 | 10.60 | 13.40 | 15.45 | 19.00 |
| L ₁ | 0.80 | 1.10 | 1.70 | 2.25 | 2.60 | 3.00 | 3.70 | 4.30 | 5.40 |
| d ₂ | 0.60 | 0.80 | 1.10 | 1.40 | 1.60 | 1.80 | 2.15 | 2.45 | 3.00 |
| K | 0.30 | 0.40 | 0.45 | 0.50 | 0.55 | 0.60 | 0.70 | 0.75 | 0.85 |
| d ₃ | 0.30 | 0.39 | 0.50 | 0.56 | 0.65 | 0.71 | 0.83 | 0.92 | 1.07 |
| B ₂ | 0.42 | 0.55 | 0.70 | 0.78 | 0.91 | 1.00 | 1.16 | 1.29 | 1.50 |
| F | 0.20 | 0.25 | 0.30 | 0.35 | 0.40 | 0.45 | 0.50 | 0.55 | 0.60 |
| n | 0.75 | 1.00 | 1.35 | 1.60 | 1.85 | 2.10 | (2.40) | (2.80) | (3.30) |
| h | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.90 | 1.00 | 1.20 |
| V | 0.40 | 0.60 | 0.75 | 0.90 | 1.20 | 1.45 | 1.60 | 1.90 | 2.00 |
| D | 0.25 | 0.30 | 0.50 | 0.55 | 0.60 | 0.70 | 0.80 | 0.90 | 1.10 |
| M | 1.05 | 1.10 | 1.30 | 1.35 | 1.40 | 1.50 | 1.70 | 1.90 | 2.30 |
| B | 0.50 | 0.60 | 1.00 | 1.10 | 1.20 | 1.40 | 1.60 | 1.80 | 2.20 |

NOTA : Los valores de "n" entre paréntesis indica que necesitan apoyo intermedio.

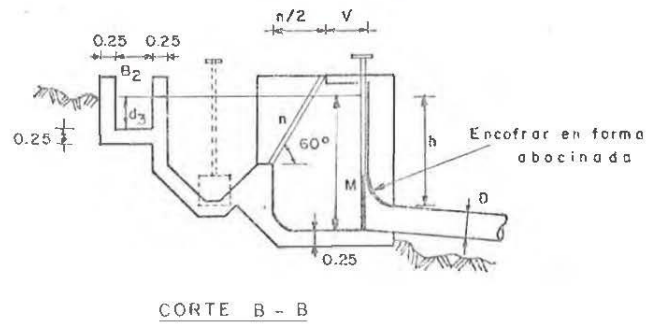
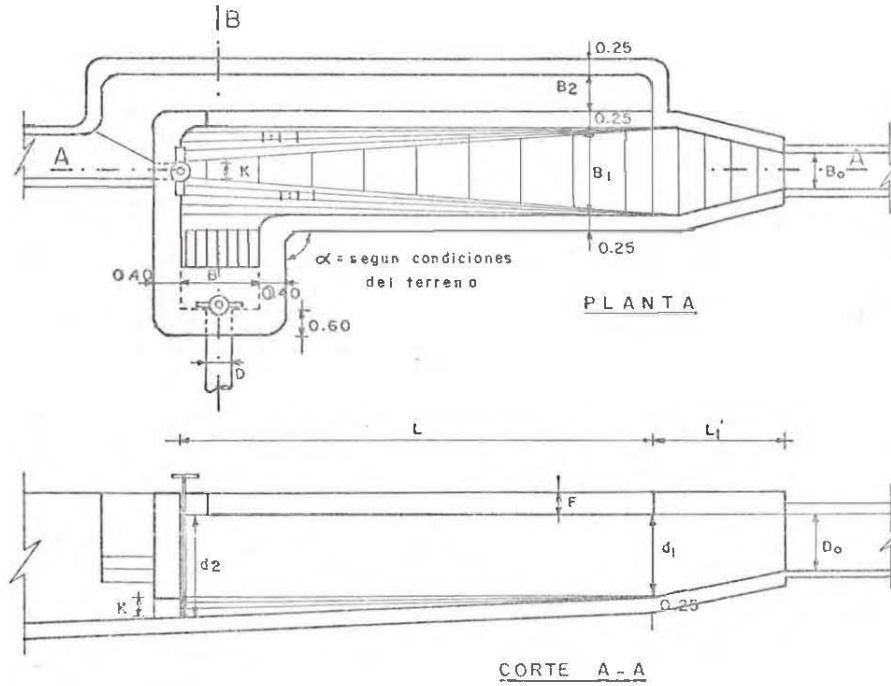
LAMINA 5.30

METRA DO PARA CAMARA DE
CARGA ESTANDARD



LAMINA 5.29

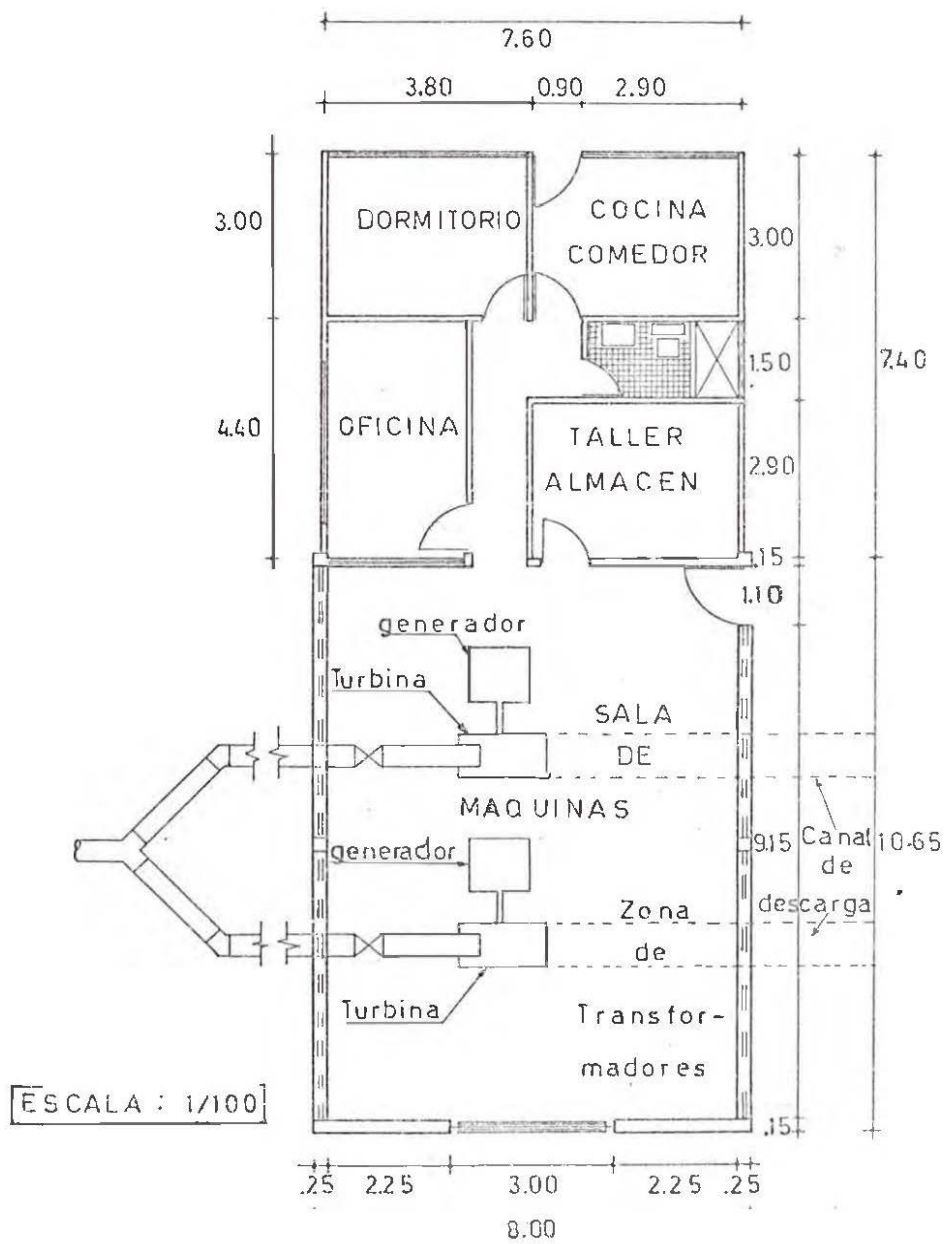
PLANO ESTANDARD DE LA
CAMARA DE CARGA



CASA DE MÁQUINAS:

LAMINA 5.37

ESQUEMA DE CASA DE MAQUINAS PARA UNA
PEQUEÑA CENTRAL HIDROELECTRICA (600 Kw.)



Para el equipo electromecánico se empleó las curvas paramétricas de Norwegian Water Resources and Energy Directorate. El tipo de cambio se consideró $1\text{NOK}=0.41\text{soles}$.

