COMITÉ TÉCNICO DE

ANÁLISIS DE FALLAS

**INFORME DEL CT-AF DEL COES**
**EV-020-2026**

# EVENTO
# 020-2026

**ACTUACIÓN DEL ERACMF EN EL SEIN**
**Del 04.02.2026 a las 11:23 H**

Lima, 4 de MARZO 2026

1. **EVENTO** : ACTUACIÓN DEL ERACMF EN EL SEIN

2. **FECHA** : 04.02.2026.

3. **HORA** : 11:23 h.

4. **PROPIETARIO** : COES

5. **INFORMES:**

| N° | EMPRESA | INFORME FINAL | FECHA DE ENTREGA |
|---|---|---|---|
| 1 | ANGLO AMERICAN QUELLAVECO S.A. | N°: CCEAAQ016 / AAQ-IF-002-2026 | 06/02/2026 |
| 2 | ANTAPACCCAY | IFP XTAN – 003– 2026 | 05/02/2026 |
| 3 | CEMENTOS PACASMAYO | MAN-2026-FEBRERO-001 | 05/02/2026 |
| 4 | ELECTRO PUNO | INFORME FINAL Nº 009 - 2026– TB | 06/02/2026 |
| 5 | ELECTRO SUR ESTE | ESE – IF - 014 – 2026 | 05/02/2026 |
| 6 | ELECTRO UCAYALI | ELUC_RACMF 04.02.2026.xlsx | 04/02/2026 |
| 7 | HIDRANDINA | Informe de Interrupción de Suministros VF (04.02.26).xls | 05/02/2026 |
| 8 | HUDBAY | RFPS-ERACMF-02 | 05/02/2026 |
| 9 | MINERA ANTAMINA | PS-RER-002 | 04/02/2026 |
| 10 | MINERA CERRO VERDE | CV-PT-07-2026 | 05/02/2026 |
| 11 | MINERA VOLCAN | No envió | - |
| 12 | MINERA MISKY MAYO | RF-02 2026.02.04 | 05/02/2026 |
| 13 | PLUZ ENERGÍA PERÚ S.A.A. | Rechazo Automático de Carga 04-02-2026 PLUZ.pdf | 05/02/2026 |

6. **DESCRIPCIÓN DEL EVENTO**

Se reportó la actuación de la 6ta Etapa del ERACMF (Esquema de Rechazo Automático de carga por Mínima Frecuencia) en el SEIN, en el momento en que no se disponía de Reserva Secundaria de Frecuencia a subir, debido a los siguientes eventos: (i) disminución de hasta 302 MW de generación de la C.T. Olleros a partir de las 10:32 h, (ii) reducción progresiva de la generación solar de 862,25 MW a 548,02 MW entre las 10:42 h y las 11:23 h, (iii) desconexión del generador G1 de la C.H. Chaglla con 234,06 MW a las 10:45 h; y, (iv) toma de caga del usuario libre Aceros Arequipa con un incremento de 132 MW a las 11:22 h, debido a la operación normal de su proceso operativo.

Como consecuencia, la frecuencia del SEIN disminuyó hasta 59,416 Hz a las 11:22:53 h y se reportó una interrupción de suministros con un total 44,1096 MW.

A las 11:24 h, se inició la normalización del suministro interrumpido de los usuarios regulados.
A las 11:35 h se comunicó a todos los usuarios normalizar el total de su carga interrumpida.

## 7. CONDICIÓN PREVIA AL EVENTO EN EL SEIN

**7.1** Las condiciones operativas del SEIN previas al evento fueron las siguientes:

**7.1.1.** Flujo por potencia por los principales centros de generación de la zona:

| N° | Central | Unidad | Generación | |
|---|---|---|---|---|
| | | | MW | MVAr |
| 1 | C.H. Chaglla | G1 | 227,95 | 29,62 |
| | | G2 | F/S | F/S |
| 2 | C.S.F. Intipampa | CSF | 14,047 | -0,117 |
| 3 | C.S.F. Matarani | CSF | 80,019 | S/D |
| 4 | C.S.F. San Martín Solar | CSF | 252,650 | S/D |
| 5 | C.S.F. Sunny | CSF | 214,677 | -0,332 |
| 6 | C.S.F. Majes | CSF | 17,986 | S/D |
| 7 | C.S.F. Clemesí | CSF | 97,848 | -13,300 |
| 8 | C.S.F. Rubí | CSF | 152,799 | 0,052 |
| 9 | C.S.F. Repartición | CSF | 12,957 | S/D |
| 10 | C.S.F. Tacna | CSF | 19,264 | S/D |
| 11 | C.T. Santo Domingo de los Olleros | Central | 214,98 | -3,410 |

F/S: Fuera de servicio por operación.

S/D: Sin Datos.

## 8. SECUENCIA DE EVENTOS

Se muestran detalladamente en el Anexo 1.

## 9. SEÑALIZACIÓN DE LAS PROTECCIONES

Las indicadas en el Anexo 2.

## 10. CONTADOR DE INTERRUPTORES Y DESCARGADORES DE SOBRETENSIÓN

No se reportaron.

## 11. ANÁLISIS DEL EVENTO

**Antecedentes**

**11.1** A partir de las 10:32 h, la C.T. Olleros disminuyó su generación de 302 MW hasta 214,98 MW a las 10:54 h, manteniéndose en ese nivel de generación (ver Figura 1).

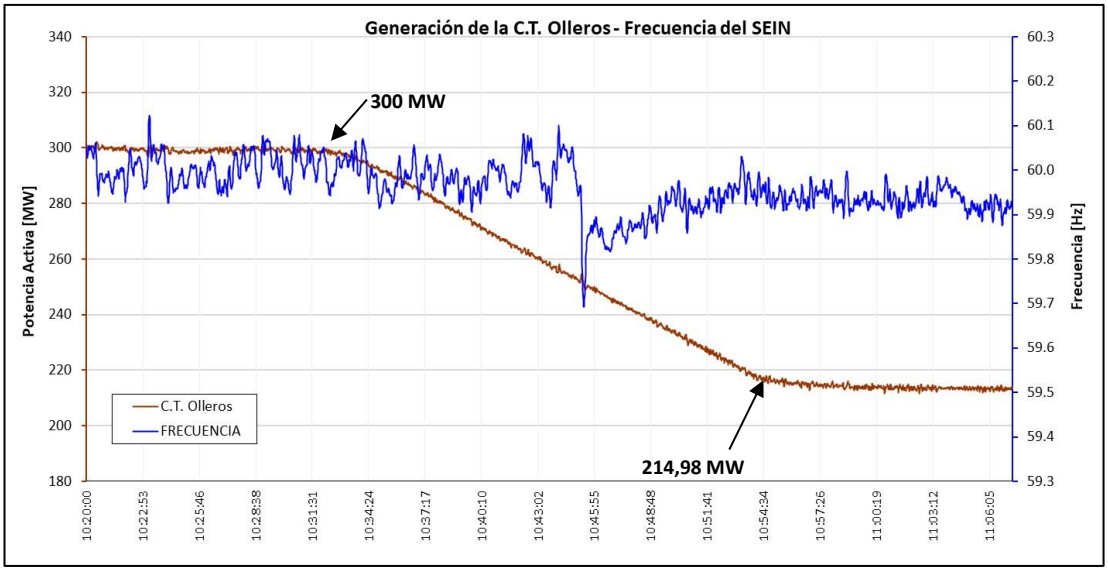


**Figura 1.** Registro de generación de la C.T. Olleros y la frecuencia del SEIN (Fuente: COES)

**11.2** A las 10:45:11 h se produjo la desconexión del generador G1 de la C.H. Chaglla cuando generaba un total de 234,06 MW, originando que la frecuencia del SEIN disminuya desde 60,034 Hz hasta 59,693 Hz (ver Figura 2).

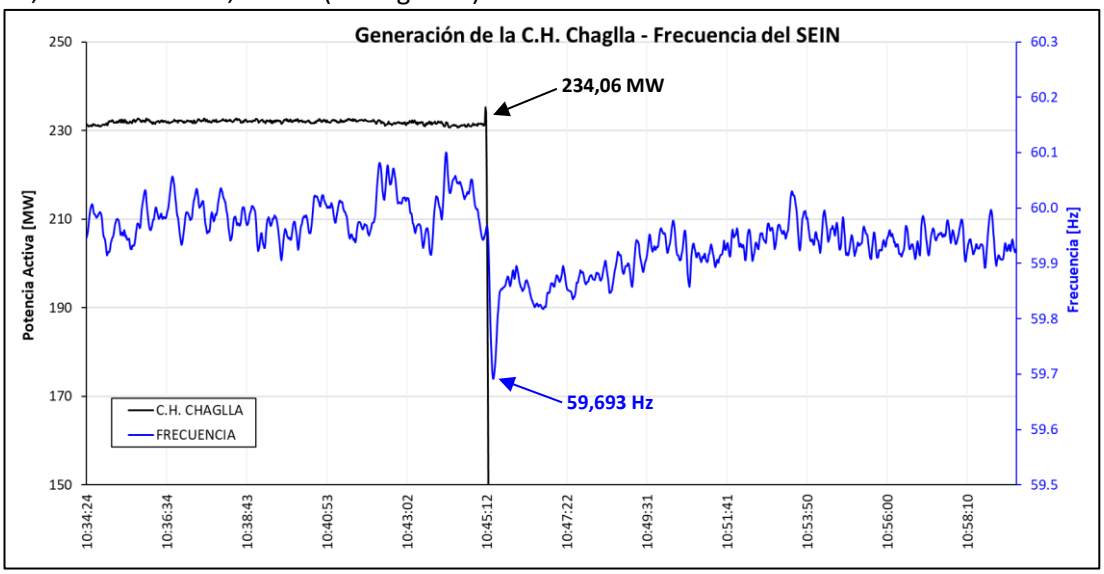


**Figura 2.** Registro de generación de la C.H. Chaglla y la frecuencia del SEIN (Fuente: COES)

**<u>Análisis del Evento</u>**

**11.3** A partir de las 10:42 h, la generación solar del SEIN abastecida principalmente por las centrales Intipampa, Matarani, San Martín Solar, Sunny, Majes, Clemesí, Rubí, Repartición y Tacna comenzó a disminuir de 862,25 MW hasta los 548,02 MW a las 11:23 h (ver Figura 3). Durante este periodo, la frecuencia del SEIN disminuyó desde 59,99 Hz hasta 59,416 Hz.

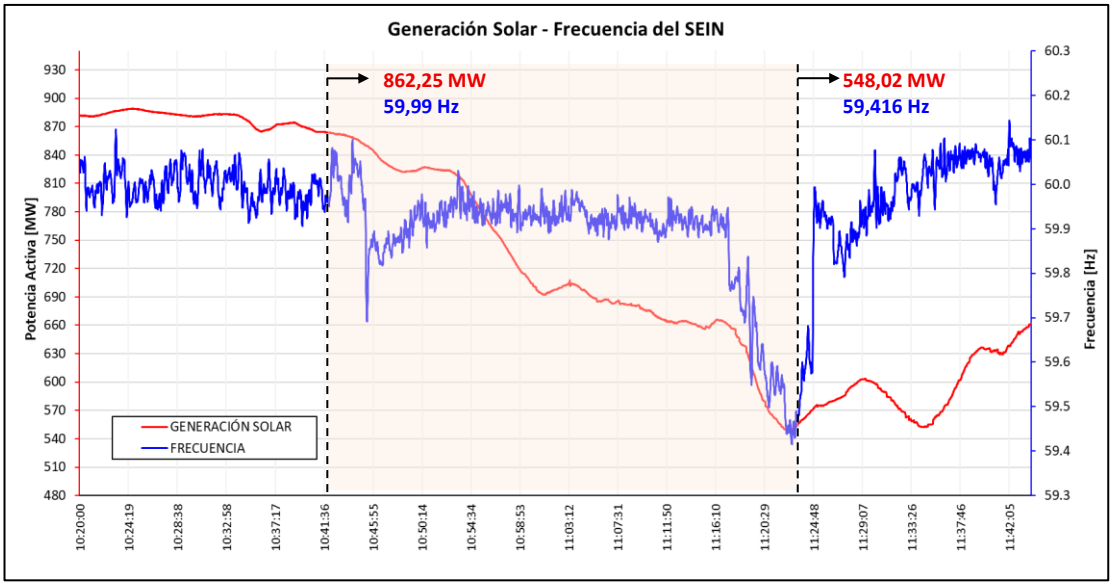


**Figura 3.** Registro de generación solar y la frecuencia del SEIN (Fuente: COES)

Al respecto, según lo informado por la empresa ORYGEN, titular de las C.S.F. Rubí y Clemesí, la disminución de generación se debió a condiciones propias de la irradiación solar registrada en la zona, asociadas a la presencia de nubosidad pasajera, lo cual afectó temporalmente la producción de dichas centrales.

Asimismo, en base a la información disponible de los registros SCADA se verificó que las C.S.F. San Martín Solar y Sunny contribuyeron con la disminución de generación durante este periodo; sin embargo, las empresas titulares no informaron el motivo. En cuanto a las demás centrales fotovoltaicas de la zona, tampoco han remitido información respecto al motivo de la reducción de generación registrada.

**11.4** En esas condiciones de operación, el requerimiento de la Reserva Secundaria de Frecuencia (RSF) a subir se incrementó progresivamente, registrándose a las 11:00 h el consumo total de la RSF a subir asignada en 209 MW (ver Figura 4).

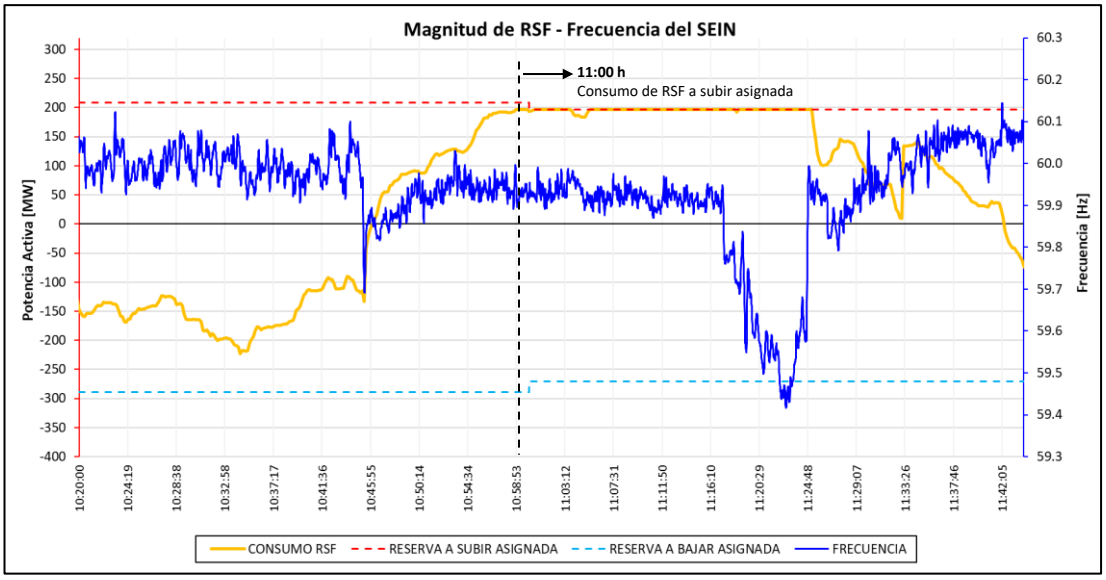


**Figura 4.** Magnitud de consumo de Reserva Secundaria asignada y la frecuencia del SEIN (Fuente: COES)

Por ese motivo, el CCO-COES realizó las siguientes coordinaciones:

- A las 10:46 h, coordinó con el CC-ORYGEN subir la generación del grupo G4 de la C.H. Huinco de 30 MW a máxima generación (69,35 MW). Al respecto, a las 11:17 h, la unidad se encontraba generando 69,88 MW; por lo tanto, se considera que cumplió con la consigna dada.

- A las 10:47 h, coordinó con el CC-EGH subir la generación de la C.H. Huanza de 50 MW a 80 MW, momento en que las unidades G1 y G2 de la central se encontraban generando 33,48 MW y 22,68 MW, respectivamente. Al respecto, a las 10:55 h, la C.H. Huanza se encontraba generando 79,92 MW; por lo tanto, se considera que cumplió con la consigna dada.

- A las 10:52 h, se coordinó con el CC-ORYGEN[1] el arranque de la unidad TG8 de la C.T. Santa Rosa, la cual cuenta con un tiempo de arranque declarado de 16 minutos, conforme a su ficha técnica; por lo tanto, la sincronización debía efectuarse a las 11:08 h. Sin embargo, la unidad sincronizó a las 11:16 h, excediendo el tiempo de arranque establecido.

- A las 10:53 h, se coordinó con el CC-EGS[2] arrancar la C.T. Independencia, la cual, tiene un tiempo de arranque declarado de 6 minutos conforme a su ficha técnica; por lo tanto, la sincronización de las unidades debía efectuarse a las 10:59 h. Sin embargo, las unidades WAR 4, WAR 3 y WAR 2 de la C.T. Independencia, sincronizaron a las 11:08 h, 11:11 h y 11:12 h, respectivamente, excediendo el tiempo de arranque establecido.

- A las 11:00 h, coordinó con el CC-EGH subir la generación de la C.H. Huanza de 80 MW a máxima generación (98,32 MW), momento en que las unidades G1 y G2 de la central se encontraban generando 48,24 MW y 46,44 MW, respectivamente. Al respecto, a las 11:24 h, la C.H. Huanza generaba 94,68 MW; por lo tanto, cumplió con la consigna de incremento de generación.

- A las 11:10 h, se coordinó arrancar la unidad TG2 de la C.T. Aguaytía, la cual cuenta con un tiempo de arranque declarado de 13 minutos, conforme a su ficha técnica; por lo tanto, la sincronización debía efectuarse a las 11:23 h. Al respecto, la unidad sincronizó a las 11:23:23 h, cumpliendo con el tiempo de arranque declarado.

- A las 11:18 h, se coordinó con el CC-ORYGEN arrancar la unidad UTI5 de la C.T. Santa Rosa, la cual cuenta con un tiempo de arranque declarado de 8 minutos, conforme a su ficha técnica; por lo tanto, la sincronización debía efectuarse a las 11:26 h. Al respecto, la unidad sincronizó a las 11:26:44 h; cumpliendo con el tiempo de arranque declarado.

- A las 11:21 h, coordinó con el CC-ORYGEN arrancar la unidad UTI6 de la C.T. Santa Rosa, la cual cuenta con un tiempo de arranque declarado de 8 minutos, conforme a su ficha técnica; por lo tanto, la sincronización debía efectuarse a las 11:29 h. Al respecto, la unidad sincronizó a las 11:27:55 h; cumpliendo con el tiempo de arranque declarado.

[1] CC-ORY: Centro de Control de ORYGEN PERU S.A.A.
[2] CC-EGS: Centro de Control de EGESUR

- A las 11:22 h, se coordinó con el CC-CPS subir a máxima generación la C.T. Olleros cuando generaba 137 MW; y considerando su rampa de toma de carga (6 MW/min), a las 11:32 h la unidad debía estar operando a potencia efectiva (197,52 MW). Sin embargo, la unidad alcanzó los 200 MW a las 11:43 h, excediendo los tiempos establecidos.

**11.5** Asimismo, entre las 11:17:05 h y las 11:22:29 h, la carga del usuario libre Aceros Arequipa se incrementó en 132 MW, debido a sus procesos operativos (ver Figura 5).

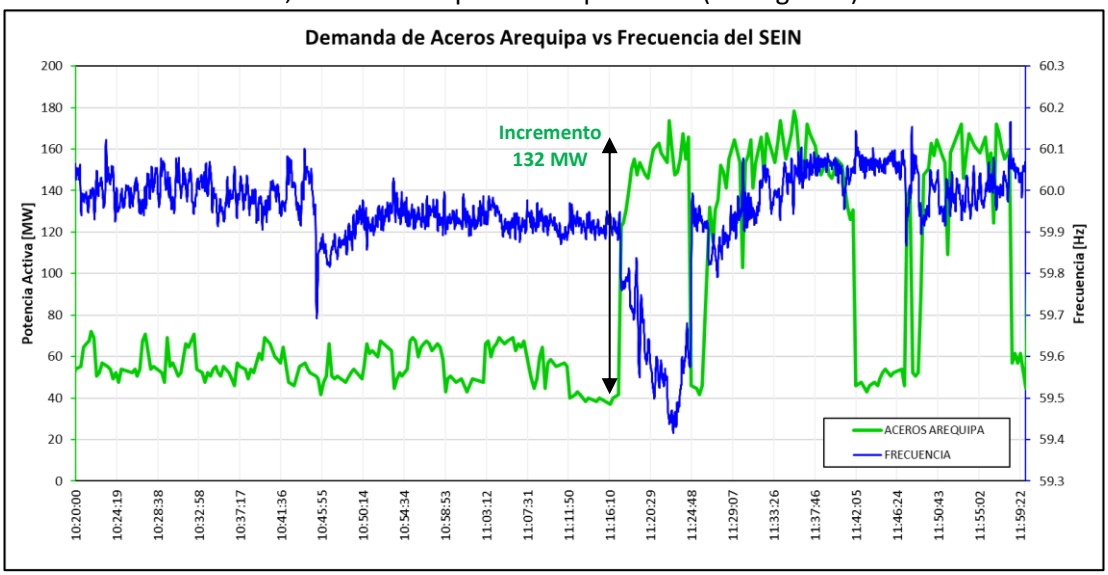


**Figura 5.** Registro de potencia activa del usuario libre Aceros Arequipa y la frecuencia del SEIN (Fuente: COES)

**11.6** Como consecuencia, a las 11:22:53 h, la frecuencia del SEIN disminuyó hasta 59,416 Hz, momento en el cual, el sistema no disponía con RSF debido a la disminución de hasta 87,02 MW de generación de la C.T. Olleros desde las 10:35 h y la desconexión del generador G1 de la C.H. Chaglla con 234,06 MW ocurrida a las 10:45:11 h. En estas condiciones de operación, la reducción progresiva y escalonada de la generación solar, que se inició a las 10:42 h, presentó una última rampa de disminución de 114,22 MW entre 11:17 h y las 11:22 h, la cual, coincidió con el incremento de carga asociado al proceso productivo del usuario libre Aceros Arequipa, contribuyendo a la desviación de frecuencia registrada (ver Figura 6).

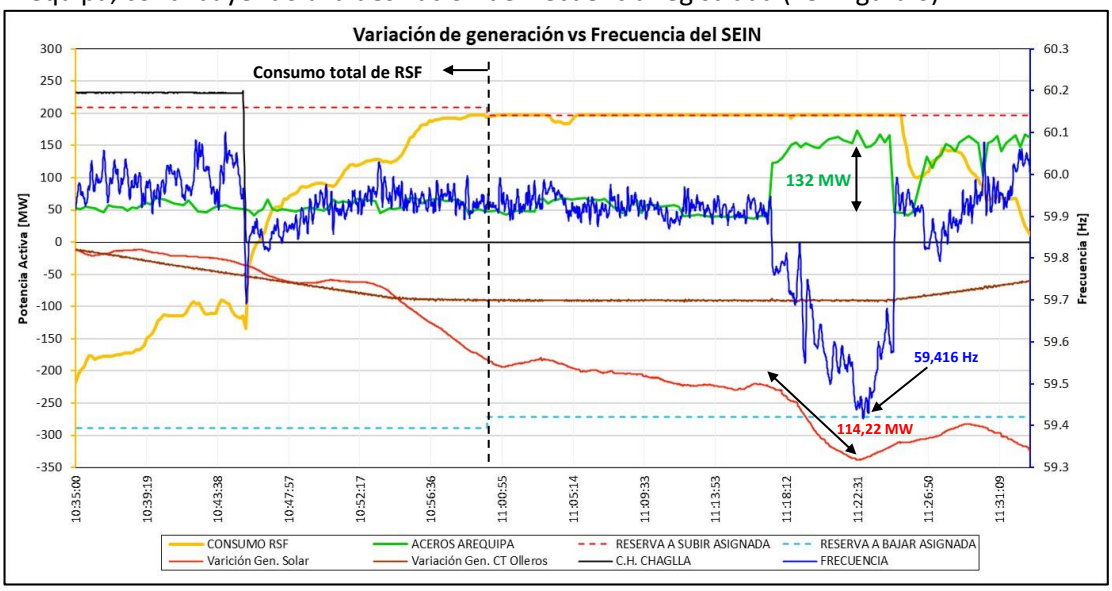


**Figura 6.** Variación de generación y la frecuencia del SEIN (Fuente: COES)

Al respecto, tal como se describió en el numeral 11.4 del informe, desde las 10:47 h, el COES dispuso de medidas operativas con la finalidad de recuperar el margen de generación, con una magnitud del orden 500 MW.

**11.7** Producto del evento, algunas empresas reportaron que, entre las 11:22 h y las 11:23 h, se produjo la activación del Esquema de Rechazo Automático de Carga por Mínima Frecuencia (ERACMF) por umbral de frecuencia – Etapa 6 (ver Anexo 2). Como consecuencia, se produjo la interrupción de suministros por un total 44,1096 MW.

**Evaluación de la RSF (Reserva Secundaria de Frecuencia)**

**11.8** En la Tabla 1 se muestran las centrales eléctricas asignadas a realizar la Regulación Secundaria de Frecuencia del SEIN en el periodo de 10:30 h a 12:00 h, así como la magnitud de la RSF asignada.

**Tabla 1.** Unidades de Generación asignadas el servicio RSF

| CENTRAL | 10:30-11:00 | | 11:00-11:30 | | 11:30-12:00 | |
|---|---|---|---|---|---|---|
| | RSF A SUBIR | RSF A BAJAR | RSF A SUBIR | RSF A BAJAR | RSF A SUBIR | RSF A BAJAR |
| | (MW) | (MW) | (MW) | (MW) | (MW) | (MW) |
| C.T. KALLPA (TV) | 184.0 | 170.1 | 184.0 | 170.1 | 172.0 | 170.8 |
| C.H. HUINCO (G2) | 0.0 | 40.9 | 0.0 | 30.5 | 0.0 | 36.2 |
| C.H. HUINCO (G3) | 25.0 | 0.0 | 25.0 | 15.4 | 25.0 | 0.0 |
| C.H. PLATANAL (G1) | 0.0 | 77.9 | 0.0 | 60.4 | 0.0 | 64.0 |
| **TOTAL** | **209.0** | **289.0** | **25.0** | **106.3** | **197.0** | **271.0** |

**11.9** Al respecto, de acuerdo con la información disponible, se concluye que la unidad TV de la C.T. Kallpa no cumplió con brindar el total de RSF a subir comprometida con un total de 184 MW (ver Figura 7); al respecto, de la información disponible se registró que entre las 10:57 h - 11:02 h, 11:05 h - 11:10 h, y las 11:13 h - 11:33 h, la señal BinOut (Set Point) de la central, se registra como inválida en el sistema AGC.

Asimismo, las CC.HH. Huinco y Platanal cumplieron con brindar la RSF a subir comprometida (ver Figuras 8,9 y 10).

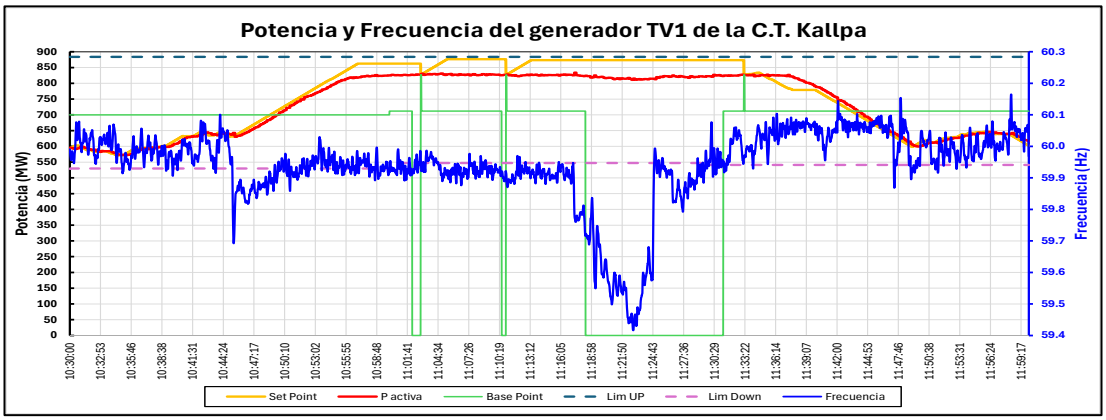


**Figura 7.** Perfil de generación de la unidad TV de la C.T. Kallpa (Fuente: SGO-COES)

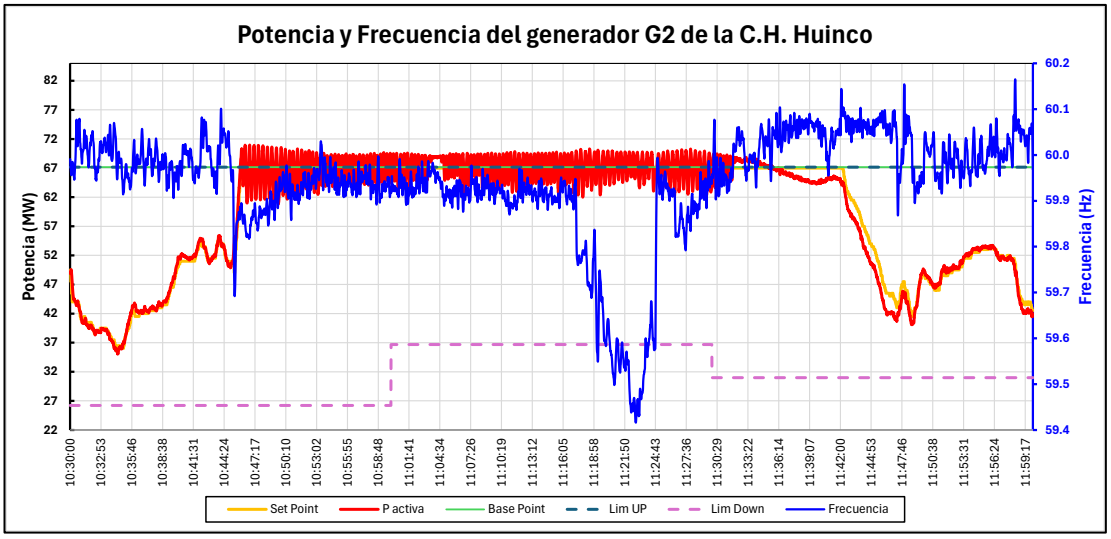


**Figura 8.** Perfil de generación de la unidad G2 de la C.H. Huinco (Fuente: SGO-COES)

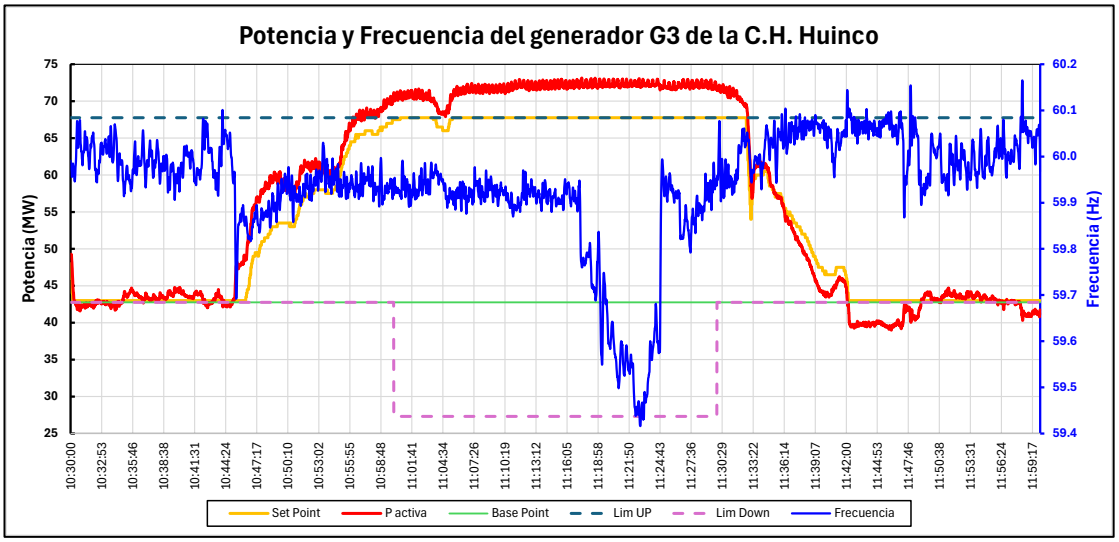


**Figura 9.** Perfil de generación de la unidad G3 de la C.H. Huinco (Fuente: SGO-COES)

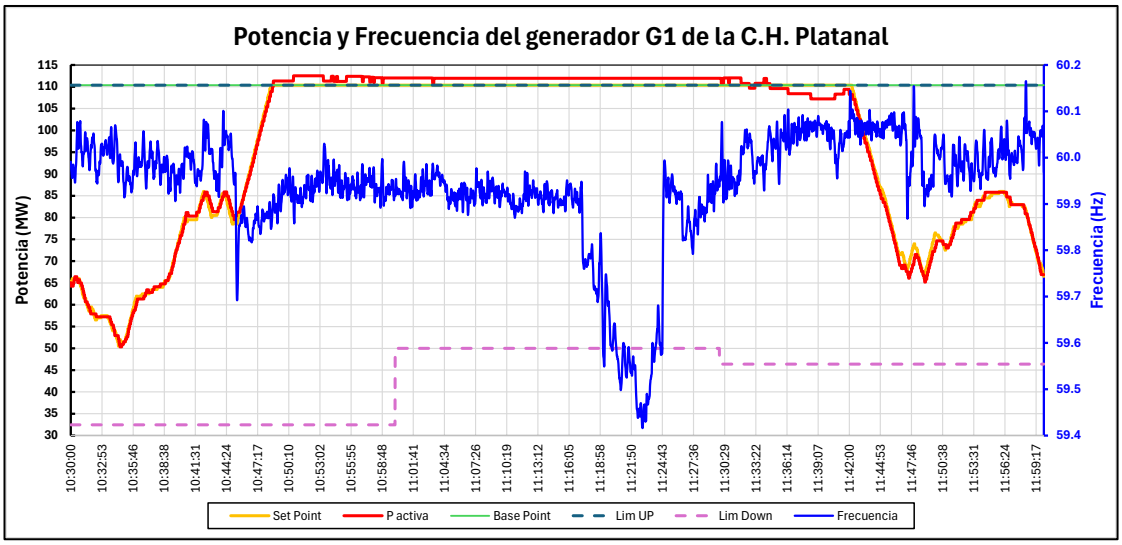


**Figura 10.** Perfil de generación de la unidad G1 de la C.H. Platanal (Fuente: SGO-COES)

## Evaluación de la actuación del ERACMF

**11.10** Para verificar la operación de los relés de mínima frecuencia, se tiene en cuenta lo siguiente:

- La tolerancia de las unidades de medida de frecuencia de los relés, cuyos valores típicos oscilan entre ± 10 mHz. Esto implica que la activación de los relés no se da para la frecuencia exacta de ajuste, sino que ocurre dentro de un intervalo de frecuencia dado por la tolerancia del relé.

- La ubicación del equipo de medida de la frecuencia para la evaluación, ya que normalmente está alejado de la carga.

**11.11** La evaluación del ERACMF se realizó con la frecuencia de los GPS de las subestaciones Talara, San Juan y San Gabán ubicados en la zona norte, centro y sur, respectivamente (ver Figura 11, Figura 12 y Figura 13). En las Tablas 2, 3 y 4, se muestran las etapas que superan los ajustes del ERACMF para cada umbral de frecuencia, de acuerdo con los ajustes del Estudio de Rechazo de Carga y Generación del año 2026 (ver Tabla 5).

**Tabla 2.** Registro de evaluación del comportamiento de la frecuencia y su derivada en la zona centro (formato F09 del procedimiento del ERACMF de Osinergmin)

| Zona | Niveles de frecuencia | | Duración del nivel f | | | Actuación de la etapa |
|---|---|---|---|---|---|---|
| | Etapa | Nivel de f (Hz) | t inicio (hh:mm:ss) | t fin (hh:mm:ss) | Duración (hh:mm:ss) | |
| A | 1ra | f ≤ 59,20 | -- | -- | -- | -- |
| | 2da | f ≤ 59,00 | -- | -- | -- | -- |
| | 3ra | f ≤ 58,80 | -- | -- | -- | -- |
| | 4ta | f ≤ 58,60 | -- | -- | -- | -- |
| | 5ta | f ≤ 58,50 | -- | -- | -- | -- |
| | 6ta | f ≤ 59,50 | 11:20:47.950 | 11:20:47.966 | 00:00:00.016 | -- |
| | | | 11:20:49.183 | 11:20:49.200 | 00:00:00.017 | -- |
| | | | 11:20:49.366 | 11:20:49.400 | 00:00:00.034 | -- |
| | | | 11:20:49.450 | 11:20:49.466 | 00:00:00.016 | -- |
| | | | 11:20:49.516 | 11:20:49.550 | 00:00:00.034 | -- |
| | | | 11:20:49.583 | 11:20:49.633 | 00:00:00.050 | -- |
| | | | 11:20:49.733 | 11:20:49.866 | 00:00:00.133 | -- |
| | | | 11:20:49.900 | 11:20:54.683 | 00:00:04.783 | -- |
| | | | 11:20:54.716 | 11:20:54.850 | 00:00:00.134 | -- |
| | | | 11:20:54.900 | 11:20:54.916 | 00:00:00.016 | -- |
| | | | 11:20:54.966 | 11:20:55.016 | 00:00:00.050 | -- |
| | | | 11:20:55.083 | 11:20:55.116 | 00:00:00.033 | -- |
| | | | 11:20:55.166 | 11:20:55.183 | 00:00:00.017 | -- |
| | | | 11:20:55.250 | 11:20:55.283 | 00:00:00.033 | -- |
| | | | 11:20:55.333 | 11:20:55.350 | 00:00:00.017 | -- |
| | | | 11:20:55.483 | 11:20:55.500 | 00:00:00.017 | -- |
| | | | 11:22:14.483 | 11:22:14.500 | 00:00:00.017 | -- |
| | | | 11:22:14.650 | 11:22:14.683 | 00:00:00.033 | -- |
| | | | 11:22:14.766 | 11:22:14.833 | 00:00:00.067 | -- |
| | | | 11:22:14.883 | 11:22:15.066 | 00:00:00.183 | -- |
| | | | **11:22:15.100** | **11:23:33.733** | **00:01:18.633** | -- |
| | | | 11:23:33.766 | 11:23:33.850 | 00:00:00.084 | -- |
| | | | 11:23:33.900 | 11:23:33.916 | 00:00:00.016 | -- |
| | | | 11:23:33.966 | 11:23:34.033 | 00:00:00.067 | -- |
| | | | 11:23:34.083 | 11:23:34.200 | 00:00:00.117 | -- |
| | | | 11:23:34.266 | 11:23:34.333 | 00:00:00.067 | -- |
| | | | 11:23:34.500 | 11:23:34.516 | 00:00:00.016 | -- |
| | | | 11:23:34.583 | 11:23:34.600 | 00:00:00.017 | -- |
| | | | 11:23:34.733 | 11:23:34.750 | 00:00:00.017 | -- |
| | | | 11:23:34.883 | 11:23:34.900 | 00:00:00.017 | -- |

| Zona | Niveles de gradiente | | | Duración gradiente | | | Actuación de la etapa |
|---|---|---|---|---|---|---|---|
| | Etapa | Arranque (Hz) | Nivel de gradiente de f | t inicio (hh:mm:ss) | t fin (hh:mm:ss) | Duración (hh:mm:ss) | |
| A | 1ra | ≤ 59,80 | f' ≤ -1,0 Hz/s | -- | -- | -- | -- |
| | 2da | ≤ 59,80 | f' ≤ -1,0 Hz/s | -- | -- | -- | -- |
| | 3ra | ≤ 59,80 | f' ≤ -1,0 Hz/s | -- | -- | -- | -- |
| | -- | | | | | | |

**Tabla 3.** Registro de evaluación del comportamiento de la frecuencia y su derivada en la zona norte (formato F09 del procedimiento del ERACMF de Osinergmin)

| Zona | Niveles de frecuencia | | Duración del nivel f | | | Actuación de la etapa |
|---|---|---|---|---|---|---|
| | Etapa | Nivel de f (Hz) | t inicio (hh:mm:ss) | t fin (hh:mm:ss) | Duración (hh:mm:ss) | |
| A | 1ra | f ≤ 59,20 | -- | -- | -- | -- |
| | 2da | f ≤ 59,00 | -- | -- | -- | -- |
| | 3ra | f ≤ 58,80 | -- | -- | -- | -- |
| | 4ta | f ≤ 58,60 | -- | -- | -- | -- |
| | 5ta | f ≤ 58,50 | -- | -- | -- | -- |
| | 6ta | f ≤ 59,50 | 11:20:49.233<br>11:20:49.433<br>11:20:49.666<br>11:20:55.083<br>11:20:55.150<br>11:22:14.566<br>11:22:14.650<br>**11:22:14.800**<br>11:23:34.316 | 11:20:49.316<br>11:20:49.550<br>11:20:54.683<br>11:20:55.183<br>11:20:55.266<br>11:22:14.583<br>11:22:14.733<br>**11:23:34.200**<br>11:23:34.350 | 00:00:00.083<br>00:00:00.117<br>00:00:05.017<br>00:00:00.100<br>00:00:00.116<br>00:00:00.017<br>00:00:00.083<br>**00:01:19.400**<br>00:00:00.034 | --<br>--<br>--<br>--<br>--<br>--<br>--<br>--<br>-- |

| Zona | Niveles de gradiente | | | Duración gradiente | | | Actuación de la etapa |
|---|---|---|---|---|---|---|---|
| | Etapa | Arranque (Hz) | Nivel de gradiente de f | t inicio (hh:mm:ss) | t fin (hh:mm:ss) | Duración (hh:mm:ss) | |
| A | 1ra | ≤ 59,80 | f' ≤ -1,0 Hz/s | -- | -- | -- | -- |
| | 2da | ≤ 59,80 | f' ≤ -1,0 Hz/s | -- | -- | -- | -- |
| | 3ra | ≤ 59,80 | f' ≤ -1,0 Hz/s | -- | -- | -- | -- |
| | -- | | | | | | |

**Tabla 4.** Registro de evaluación del comportamiento de la frecuencia y su derivada en la zona sur (formato F09 del procedimiento del ERACMF de Osinergmin)

| Zona | Niveles de frecuencia | | Duración del nivel f | | | Actuación de la etapa |
|---|---|---|---|---|---|---|
| | Etapa | Nivel de f (Hz) | t inicio (hh:mm:ss) | t fin (hh:mm:ss) | Duración (hh:mm:ss) | |
| A | 1ra | f ≤ 59,20 | -- | -- | -- | -- |
| | 2da | f ≤ 59,00 | -- | -- | -- | -- |
| | 3ra | f ≤ 58,80 | -- | -- | -- | -- |
| | 4ta | f ≤ 58,60 | -- | -- | -- | -- |
| | 5ta | f ≤ 58,50 | -- | -- | -- | -- |
| | 6ta | f ≤ 59,50 | 11:20:49.000<br>11:22:14.550<br>**11:22:15.100** | 11:20:55.100<br>11:22:15.000<br>**11:23:34.050** | 00:00:06.100<br>00:00:00.450<br>**00:01:18.950** | --<br>--<br>-- |

| Zona | Niveles de gradiente | | | Duración gradiente | | | Actuación de la etapa |
|---|---|---|---|---|---|---|---|
| | Etapa | Arranque (Hz) | Nivel de gradiente de f | t inicio (hh:mm:ss) | t fin (hh:mm:ss) | Duración (hh:mm:ss) | |
| A | 1ra | ≤ 59,80 | f' ≤ -1,0 Hz/s | -- | -- | -- | -- |
| | 2da | ≤ 59,80 | f' ≤ -1,0 Hz/s | -- | -- | -- | -- |
| | 3ra | ≤ 59,80 | f' ≤ -1,0 Hz/s | -- | -- | -- | -- |
| | -- | | | | | | |

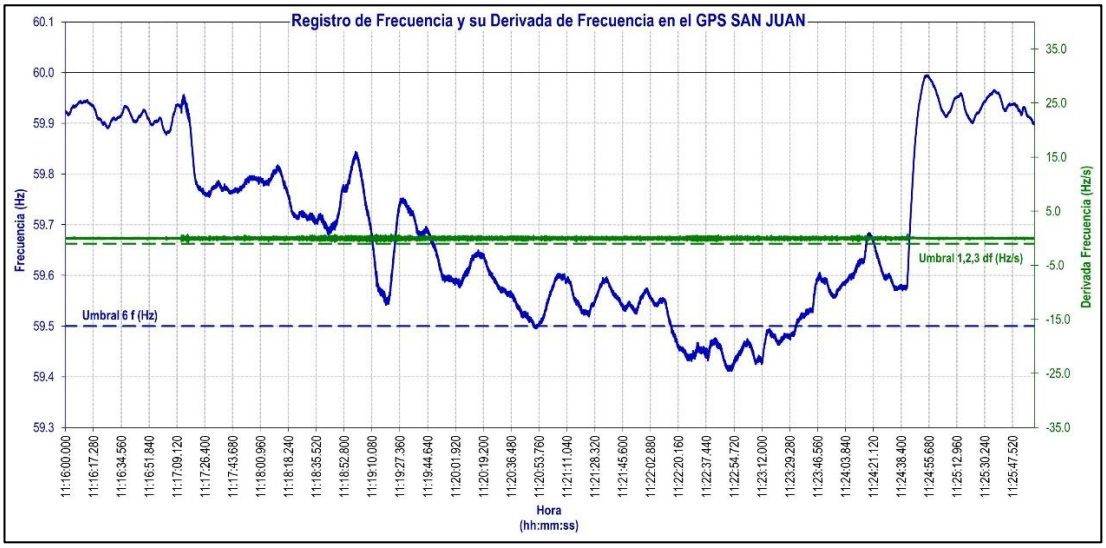


**Figura 11.** Registro de frecuencia y su derivada de frecuencia en la S.E. San Juan (Fuente: GPS COES)

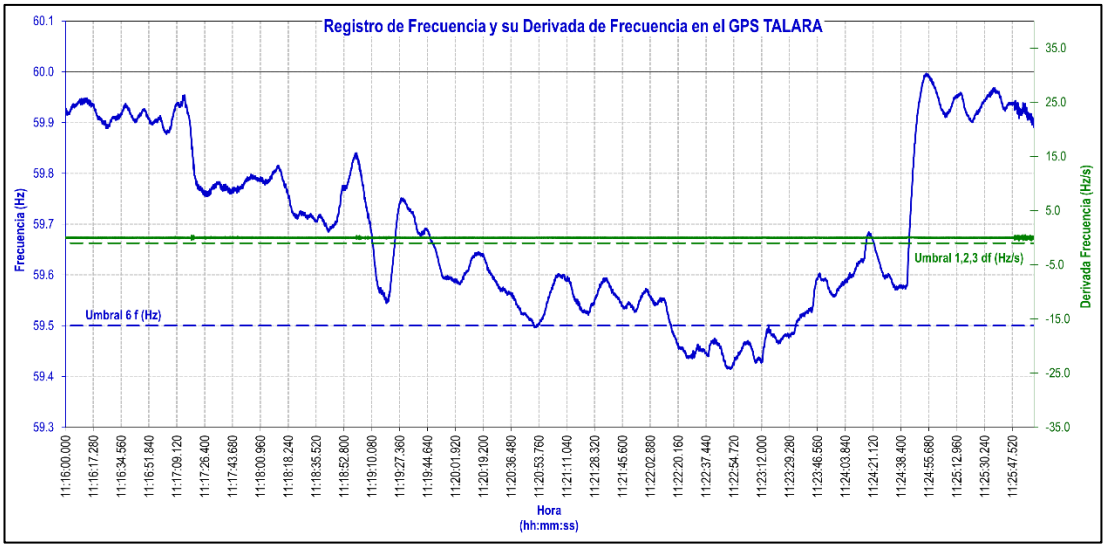


**Figura 12.** Registro de frecuencia y su derivada de frecuencia en la S.E. Talara (Fuente: GPS COES)

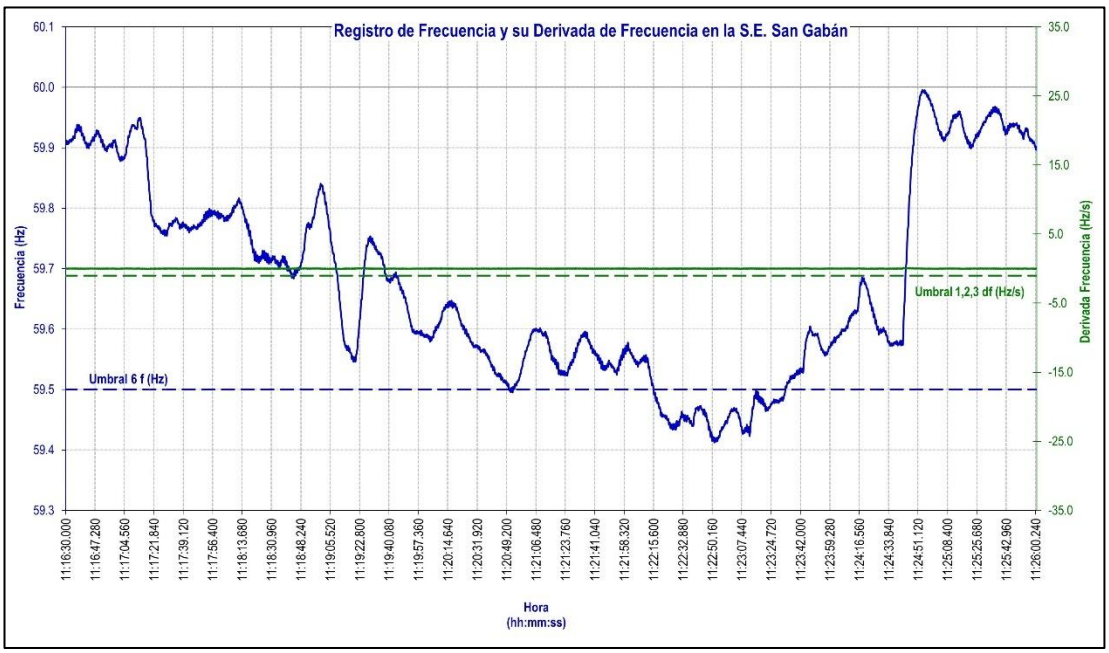


**Figura 13.** Registro de frecuencia y su derivada de frecuencia en la S.E. San Gabán (Fuente: GPS COES)

**Tabla 5.** Ajustes del ERACMF 2025 Zona A

**ERACMF de la Zona A**
**(SEIN)**

| Número de Etapas | Porcentaje de rechazo en c/etapa | RELES DE UMBRAL | | RELES DE DERIVADA | | |
|---|---|---|---|---|---|---|
| | | FRECUENCIA (Hz) | TEMPORIZACIÓN (s) | ARRANQUE Hz | PENDIENTE (Hz / s) | TEMPORIZACIÓN (s) |
| 1 | 3 % | 59.20 | 0.15 | 59.8 | -1.0 | 0.15 |
| 2 | 4.5 % | 59.00 | 0.15 | 59.8 | -1.0 | 0.15 |
| 3 | 6 % | 58.80 | 0.15 | 59.8 | -1.0 | 0.15 |
| 4 | 7 % | 58.60 | 0.15 | | | |
| 5 | 6 % | 58.50 | 0.15 | | | |
| 6 | 1.5 % | 59.50 | 60.0 | | | |

(1) La temporización de los relés de derivada de frecuencia no incluye el tiempo requerido por el relé para medir la pendiente. Se recomienda ajustar la ventana de medición de la pendiente de 4 a 6 ciclos.

(2) La etapa 6 es un respaldo para reponer la frecuencia, si luego de los rechazos de carga, la frecuencia queda por debajo de 59.5 Hz, por lo cual se deberá implementar una lógica en donde para su actuación se considere un permisivo similar a la etapa 1 (*)

(3) La temporización de los relés de derivada de frecuencia será 300 ms en las cargas que se localizan aguas abajo de:
- Transformadores 138/66 kV de la subestación Huallanca y 10/66 kV de la subestación Kiman Ayllu.
- Subestación Zorritos 220 kV
- Subestación Talara 220 kV
- Subestación Pariñas 220 kV
- Líneas L-6654 y L-6698
- Subestación Oxapampa 138/60/23 kV

(4) La temporización de los relés de derivada de frecuencia será 350 ms en las cargas que se localizan aguas debajo de las subestaciones Quencoro, Cachimayo, DoloresPata, Machupicchu y Abancay.

(*) Lógica de actuación de la etapa 6:

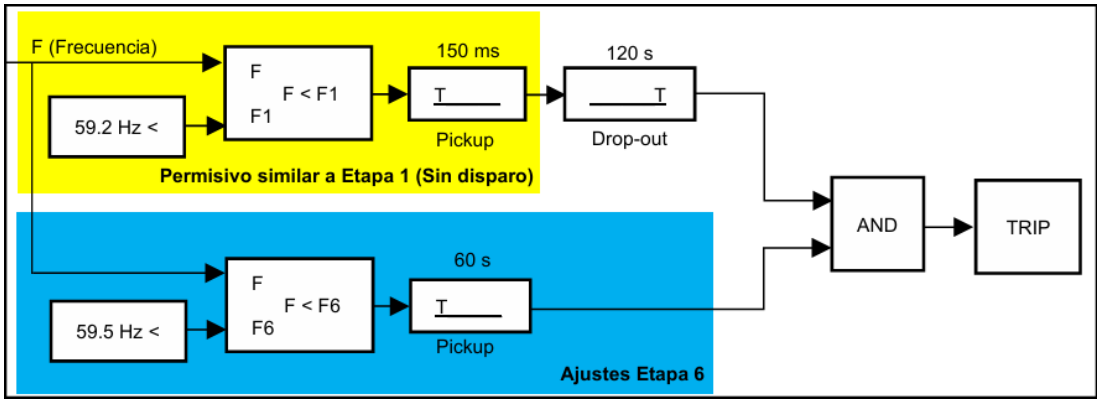


**Figura 14.** Esquema lógico para la activación de la Etapa 6 del ERACMF (Fuente: COES)

**11.12** De acuerdo con las Figura 11, 12 y 13 y las Tablas 2, 3 y 4, y considerando la tolerancia en la medición de los relés de frecuencia de ± 10 mHz, se concluye que no se presentaron condiciones para activar las etapas del ERACMF por umbral y/o derivada de frecuencia.

**11.13** Con respecto a las condiciones de activación de la Etapa 6, es necesario precisar que, según lo establecido en el Estudio Anual del ERACMF para el año 2026, deben cumplirse de manera simultánea lo siguiente:

- Activación de señal permisiva asociado a Etapa 1, la cual se genera cuando la frecuencia del sistema disminuye por debajo de 59,2 Hz por un tiempo de 150 ms (pickup) y un tiempo de retención (drop-ou) de 120 segundos. Esta condición confirma que el sistema ha experimentado una desviación significativa de frecuencia.

- Activación de la Etapa 6 del ERACMF, la cual debe configurarse para operar cuando la frecuencia sea inferior a 59,50 Hz durante un tiempo continuo de 60 segundos (pickup).

En eses sentido, la orden de disparo (TRIP) se genera únicamente cuando ambas señales se encuentran activas mediante una compuerta lógica AND (ver Figura 14), garantizando que la Etapa 6 no actúe de forma independiente, sino como un mecanismo de respaldo orientado a contribuir con la recuperación de la frecuencia luego de los rechazos iniciales de carga (Etapa 1 a 5), en caso esta no se restablezca adecuadamente. Asimismo, considerando el creciente ingreso de generación solar y la variabilidad asociada al paso de nubes, pueden presentarse fluctuaciones temporales de frecuencia; por lo tanto, la implementación del permisivo evita la actuación aislada de la Etapa 6 ante este tipo de perturbaciones transitorias.

Ahora bien, del análisis del evento se verifica que no se alcanzó la frecuencia de 59,2 Hz requerida para generar el permisivo; por lo tanto, no se presentaron condiciones necesarias para la actuación de la Etapa 6 del ERACMF.

**11.14** Las interrupciones producidas por actuación del ERACMF se muestran en la Tabla por empresa, zona y etapa.

| ZONA | EMPRESA | ETAPA | | | | | | | | | | TOTAL ZONA (MW) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | f | | | | | | | Df | | | |
| | | 1° | 2° | 3° | 4° | 5° | 6° | 7° (Reposición) | 1° | 2° | 3° | |
| ZONA A | AIN | | | | | | | | | | | 0,000 |
| ZONA A | ALG | | | | | | | | | | | 0,000 |
| ZONA A | ARE | | | | | | | | | | | 0,000 |
| ZONA A | BCP | | | | | | 0,120 | | | | | 0,120 |
| ZONA A | BVA | | | | | | 0,120 | | | | | 0,120 |
| ZONA A | CMM | | | | | | 0,100 | | | | | 0,100 |
| ZONA A | CMX | | | | | | 0,0222 | | | | | 0,0222 |
| ZONA A | CSL | | | | | | 0,1032 | | | | | 0,1032 |
| ZONA A | CSM | | | | | | | | | | | 0,000 |
| ZONA A | CTP | | | | | | 0,027 | | | | | 0,027 |
| ZONA A | CTS | | | | | | 0,0258 | | | | | 0,0258 |
| ZONA A | CVM | | | | | | 0,030 | | | | | 0,030 |
| ZONA A | ECO | | | | | | | | 0,110 | 0,130 | | 0,240 |
| ZONA A | EDN1 | | | | | | 12,415 | | | | | 12,415 |
| ZONA A | ELC | | | | | | 1,461 | | | | | 1,461 |
| ZONA A | ELN | | | | | | 2,940 | | | | | 2,940 |
| ZONA A | EOR | | | | | | 1,600 | | | | | 1,600 |
| ZONA A | EPU | | | | | | 0,290 | | | | | 0,290 |
| ZONA A | ESE | | | | | | 2,092 | | | | | 2,092 |
| ZONA A | EUC | | | | | | 1,400 | | | | | 1,400 |
| ZONA A | HID | | | | | | 4,730 | | | | | 4,730 |
| ZONA A | HUD | | | | | | 1,170 | | | | | 1,170 |
| ZONA A | JCK | | | | | | 0,0364 | | | | | 0,0364 |
| ZONA A | MAP | | | | | | 0,500 | | | | | 0,500 |
| ZONA A | MCV | | | | | | 7,540 | | | | | 7,540 |
| ZONA A | MEX | | | | | | 0,070 | | | | | 0,070 |
| ZONA A | MXT | | | | | | 1,830 | | | | | 1,830 |
| ZONA A | PAS | | | | | | 0,300 | | | | | 0,300 |
| ZONA A | PC3 | | | | | | | | | | | 0,000 |
| ZONA A | POL | | | | | | 0,110 | | | | | 0,110 |

| ZONA | EMPRESA | ETAPA | | | | | | | | | | TOTAL ZONA (MW) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | f | | | | | | | Df | | | |
| | | 1° | 2° | 3° | 4° | 5° | 6° | 7° (Reposición) | 1° | 2° | 3° | |
| ZONA A | PPL | | | | | | 0,062 | | | | | 0,062 |
| ZONA A | QLL | | | | | | 2,500 | | | | | 2,500 |
| ZONA A | SM2 | | | | | | | | | | | 0,000 |
| ZONA A | SMI | | | | | | 0,135 | | | | | 0,135 |
| ZONA A | TAS | | | | | | 0,0276 | | | | | 0,0276 |
| ZONA A | TCA | | | | 0,0582 | | | | | | | 0,0582 |
| ZONA A | TNA | 0,0872 | | | | | | | | | | 0,0872 |
| ZONA A | TNF | | | | | | 0,140 | | | | | 0,140 |
| ZONA A | VOL | | | | | | 1,580 | | | | | 1,580 |
| ZONA A | XMS | | | | | | | | | | | 0,000 |
| ZONA A | YAN | | | | | | 0,200 | | | | | 0,200 |
| **TOTAL ETAPA** | | **0,0872** | **0,000** | **0,000** | **0,0582** | **0,000** | **43,6772** | **0,000** | **0,110** | **0,130** | **0,000** | **44,0626** |

- AIN: AGROMAR INDUSTRIAL S.A.
- ALG: EMPRESA ALGODONERA S A
- ARE: MINERA ARES
- BCP: BANCO DE CREDITO DEL PERU
- BVA: BANCO BBVA PERU
- CMM: MINERA MISKY MAYO
- CMX: INDUSTRIAL CROMOTEX S A
- CSL: CERAMICA SAN LORENZO S.A.C.
- CSM: COMPAÑIA MINERA SAN IGNACIO DE MOROCOCHA S.A.A.
- CTP: CORPORACION TURISTICA PERUANA S.A.C.
- CTS: CORPORACION TEXTIL DEL SUR S.A.C.
- CVM: CARVIMSA
- ECO: ESMERALDA CORP S.A.C.
- EDN1: PLUZ ENERGÍA PERÚ S.A.A.
- ELC: ELECTROCENTRO
- ELN: ELECTRONORTE S.A.
- EOR: ELECTRO ORIENTE
- EPU: ELECTRO PUNO
- ESE: ELECTRO SUR ESTE
- EUC: ELECTRO UCAYALI
- HID: HIDRANDINA
- HUD: HUDBAY PERU S.A.C.
- JCK: ADMINISTRADORA JOCKEY PLAZA SHOPPING CENTER S.A.
- MAP: NEXA RESOURCES EL PORVENIR S.A.C.
- MCV: MINERA CERRO VERDE
- MEX: MEXICHEM
- MXT: COMPAÑIA MINERA ANTAPACCAY S.A.
- PAS: PAN AMERICAN SILVER HUARON S.A.
- PC3: PRODUCTORA ANDINA DE CONGELADOS S.R.L.
- POL: POLINPLAST S.A.C.
- PPL: PERUPLAST
- QLL: ANGLO AMERICAN QUELLAVECO S.A.
- SM2: SERVICIOS DE MOLDES PLASTICOS S.A.C.
- SMI: SAN MIGUEL INDUSTRIAS PET S.A.
- TAS: TECNOLOGICA DE ALIMENTOS
- TCA: TEXTILES CAMONES S.A.
- TNA: FCA NAC DE ACUMULADORES ETNA S A
- TNF: TECNOFIL S A
- VOL: MINERA VOLCAN
- XMS: XIMESA S.A.C.
- YAN: MINERA YANACOCHA

**11.15** La evaluación de las interrupciones producidas por actuación del ERACMF se muestran en el Anexo 2 por empresa

**11.16** En las Figuras 15, 16 Y 17 se muestran las empresas que reportaron sus suministros interrumpidos en el Portal Web de OSINERGMIN.

| Empresa | Etapa 1 | Etapa 2 | Etapa 3 | Etapa 4 | Etapa 5 | Etapa 6 | Total |
|---|---|---|---|---|---|---|---|
| EMPRESA ALGODONERA S.A. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.05 |
| COMPANIA MINERA ARES S.A.C. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| COMPAÑIA MINERA ARGENTUM SA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ALTEX TRADING S.A.C. Chimbote | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| BANCO DE CREDITO DEL PERU | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.12 | 0.12 |
| BANCO CONTINENTAL | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.12 | 0.12 |
| INMOBILIARIA BOTAFOGO S.A.C. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| OTERRA S.A. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CATALINA HUANCA SOCIEDAD MINERA S.A.C. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| COMPAÑIA MINERA MISKI MAYO SRL. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.10 |
| INDUSTRIAL CROMOTEX S.A. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.02 |
| CERAMICA SAN LORENZO S.A.C. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.10 |
| CENTURYLINK PERU S.A. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CORPORACION TEXTIL DEL SUR | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.03 |
| CARTONES VILLA MARINA S.A. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.03 |
| Inmobiliaria Eburns s.a.c. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PLUZ ENERGIA PERU S.A.A | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 12.42 | 12.42 |
| ELECTROCENTRO | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.46 | 1.46 |

**Figura 15.** Empresas que reportaron interrupción de suministro en la Extranet de OSINERGMIN, actualizado al 03.03.2026

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ELECTRONORTE | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.94 | 2.94 |
| ESMERALDA CORP | 0.00 | 0.24 | 0.00 | 0.00 | 0.00 | 0.00 | 0.24 |
| ELECTRO ORIENTE | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.60 | 1.60 |
| ELECTRO PUNO | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.29 | 0.29 |
| ELECTRO SUR ESTE | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.09 | 2.09 |
| ELECTRO UCAYALI | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.40 | 1.40 |
| COMPAÑÍA FOOD RETAIL S.A.C. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| A W FABER CASTELL PERUANA S A | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| F Y D INVERSIONES S.A.C. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| AGROMAR INDUSTRIAL S.A. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| HIDRANDINA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4.73 | 4.73 |
| PAN AMERICAN SILVER HUARON S.A. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.30 | 0.30 |
| HUDBAY PERU S.A.C. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.17 | 1.17 |
| ADMINISTRADORA JOCKEY PLAZA SHOPPING CENTER S.A. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.04 |
| INVERSIONES KANDOO S.A.C. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PARQUE LAMBRAMANI SAC | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LA ARENA S.A. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| INVERSIONES LENDIPO S.A.C. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| INVERSIONES LAMBORE S.A.C. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MAKRO SUPERMAYORISTA S.A. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| NEXA RESOURCES EL PORVENIR S.A.C. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.50 | 0.50 |
| MINERA BOROO MISQUICHILCA S.A. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ALPAYANA S.A. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MARCOBRE S.A.C. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

**Figura 16.** Empresas que reportaron interrupción de suministro en la Extranet de OSINERGMIN, actualizado al 03.03.2026

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| SOCIEDAD MINERA CERRO VERDE S.A.A. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 7.54 | 7.54 |
| MEXICHEM PERU | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.07 |
| COMPANIA MINERA SAN IGNACIO DE MOROCOCHA S.A.A. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| COMPAÑIA MINERA ANTAPACCAY S.A. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.83 | 1.83 |
| TIENDAS PERUANAS SA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PROANCO S.R.L | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PERUPLAST S A | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.06 | 0.06 |
| INMOBILIARIA PISAC S.A.C. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CEMENTOS PACASMAYO S.A.A. (S.E. GUADALUPE 60 KV + S.E. PIURA OESTE 220 KV) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| POLINPLAST S.A.C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.11 | 0.11 |
| PAPELERA DEL SUR S A | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PETROLEOS DEL PERU PETROPERU S.A. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Plaza Vea Oriente S.A.C. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| ANGLO AMERICAN QUELLAVECO S.A. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.50 | 2.50 |
| INMOBILIARIA EL QUINDE S.A.C. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| El quinde shopping plaza S.A.C. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| SERVICIOS DE MOLDES PLASTICOS S.A.C. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| SAN MIGUEL INDUSTRIAS PET S.A. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.14 | 0.14 |
| SUPERMERCADOS PERUANOS SOCIEDAD ANONIMA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| TECNOLOGICA DE ALIMENTOS S.A. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.03 |
| FAC NAC DE ACUMULADORES ETNA S.A. | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.09 |
| TECNOFIL S.A. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.14 | 0.14 |
| TECNOLOGIA TEXTIL S.A. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| CORPORACION TURISTICA PERUANA S.A.C | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.03 |
| TEXTILES CAMONES S.A. | 0.00 | 0.00 | 0.00 | 0.06 | 0.00 | 0.00 | 0.06 |
| VOLCAN COMPANIA MINERA S.A.A. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.58 | 1.58 |
| ASOCIACIÓN EDUCACIONAL WILLIAMSON DEL PERU | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| XIMESA | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MINERA YANACOCHA S.R.L. | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.20 | 0.20 |

**Figura 17.** Empresas que reportaron interrupción de suministro en la Extranet de OSINERGMIN, actualizado al 03.03.2026

**11.17** Con respecto al reporte de interrupciones que se ha registrado en el Portal Web del OSINERGMIN, se indica lo siguiente:

- Las empresas CENTURYLINK PERU S.A., Inmobiliaria Eburns s.a.c., COMPAÑIA MINERA ARGENTUM SA, COMPAÑÍA FOOD RETAIL S.A.C., A W FABER CASTELL PERUANA S A, F Y D INVERSIONES S.A.C., ALTEX TRADING S.A.C. Chimbote, INVERSIONES KANDOO S.A.C., PARQUE LAMBRAMANI SAC, LA ARENA S.A., INVERSIONES LENDIPO S.A.C., INVERSIONES LAMBORE S.A.C., MAKRO SUPERMAYORISTA S.A., MINERA BOROO MISQUICHILCA S.A., ALPAYANA S.A., MARCOBRE S.A.C., TIENDAS PERUANAS SA, INMOBILIARIA PISAC S.A.C., CEMENTOS PACASMAYO S.A.A. (S.E. GUADALUPE 60 KV + S.E. PIURA OESTE 220 KV), PAPELERA DEL SUR S A, PETROLEOS DEL PERU PETROPERU S.A., Plaza Vea Oriente S.A.C., INMOBILIARIA EL QUINDE S.A.C., El quinde shopping plaza S.A.C., INMOBILIARIA BOTAFOGO S.A.C., SUPERMERCADOS PERUANOS SOCIEDAD ANONIMA, TECNOLOGIA TEXTIL S.A., ASOCIACIÓN EDUCACIONAL WILLIAMSON DEL PERU, OTERRA S.A., CATALINA HUANCA SOCIEDAD MINERA S.A.C., registraron en el portal de OSINERGMIN activación del ERACMF, sin completar los campos de "Demanda Interrumpida" y "Señalización de Disparo". Por lo tanto, no corresponde evaluar la activación.

**Maniobras de restablecimiento**

**11.18** A las 10:52 h, el CCO-COES coordinó con el CC-ORYGEN arrancar la unidad TG8 de la C.T. Santa Rosa

**11.19** A las 10:53 h, el CCO-COES coordinó con el CC-EGS [3]arrancar la C.T. Independencia.

**11.20** A las 11:10 h, el CCO-COES coordinó con el CC-TER [4]arrancar la unidad TG2 de la C.T. Aguaytía.

[3] CC-EGS: Centro de Control de EGESUR
[4] CC-TER: Centro de Control de TERMOSELVA

**11.21** A las 11:18 h, el CCO-COES coordinó con el CC-ORYGEN arrancar la unidad UTI5 de la C.T. Santa Rosa.

**11.22** A las 11:21 h, el CCO-COES coordinó con el CC-ORYGEN arrancar la unidad UTI6 de la C.T. Santa Rosa.

**11.23** A las 11:24 h, se coordinó con el CC-EDN [5]normalizar 10 MW de suministros interrumpidos.

**11.24** A las 11:26 h, se coordinó con el CC-EUC [6]normalizar suministros interrumpidos.

**11.25** A las 11:26 h, se coordinó con el CC-EDN normalizar el 100% de los suministros interrumpidos.

**11.26** A las 11:26 h, se coordinó con el CC-EPU[7] normalizar suministros interrumpidos.

**11.27** A las 11:26:44 h, la unidad UTI5 de la C.T. Santa Rosa sincronizó con el SEIN.

**11.28** A las 11:27 h, se coordinó con el CC-ESE[8] normalizar suministros interrumpidos

**11.29** A las 11:27 h, se coordinó con el CC-MXT [9]normalizar el suministro interrumpido.

**11.30** A las 11:27 h, se coordinó con el CC-MCV [10]normalizar el suministro interrumpido.

**11.31** A las 11:27:55 h, la unidad UTI6 de la C.T. Santa Rosa sincronizó con el SEIN.

**11.32** A las 11:29 h, se coordinó con el CC-ELC[11]normalizar suministros interrumpidos.

**11.33** A las 11:29 h, se coordinó con el CC-KLP[12]normalizar el suministro interrumpido de su cliente PANASA

**11.34** A las 11:32 h, se coordinó con el CC-CMA[13] normalizar el suministro interrumpido

**11.35** A las 11:35 h, el CCO-COES, mediante correo electrónico, comunicó a todos los Agentes del SEIN normalizar el 100% de los suministros interrumpidos de los usuarios libres y regulados

**11.36** A las 11:35 h, se coordinó con el CC-HUD[14] normalizar el suministro interrumpido.

**11.37** A las 11:37 h, se coordinó con el CC-ENG[15] normalizar el suministro interrumpido de sus clientes.

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[5] CC-EDN: Centro de Control de PLUZ ENERGIA
[6] CC-EUC: Centro de Control de ELECTRO UCAYALI
[7] CC-EPU: Centro de Control de ELECTRO PUNO
[8] CC-ESE: Centro de Control de ELECTRO SUR ESTE
[9] CC-MXT: Centro de Control de COMPAÑÍA MINERA ANTAPACCAY
[10] CC-MCV: Centro de Control de MINERA CERRO VERDE
[11] CC-ELC: Centro de Control de ELECTROCENTRO
[12] CC-KLP: Centro de Control de KALLPA GENERACION
[13] CC-CMA: Centro de Control de MINERA ANTAMINA
[14] CC-HUD: Centro de Control de HUDBAY PERU
[15] CC-ENG: Centro de Control de ENGIE

## 12. CONSECUENCIAS

**12.1 En la calidad del Producto:** No hubo trasgresiones a la calidad del producto.

**12.2 En la calidad del suministro:**

12.2.1 Las interrupciones de suministro que se produjeron por activación del ERACMF fueron las siguientes:

| ZONA | SUMINISTRO | SUBESTACIÓN | POTENCIA (MW) | INICIO (HH:MM:SS) | FINAL (HH:MM:SS) | DURACIÓN (MIN) | FUNCIÓN | ETAPA |
|---|---|---|---|---|---|---|---|---|
| ZONA A | AIN-SUBESTACIÓN PRINCIPAL(TABLERO GENERAL DE 230 V) | SUBESTACIÓN PRINCIPAL | 0,000 | 11:23:01 | 11:29:01 | 6,00 | F | ETAPA 2 |
| ZONA A | AIN-SUBESTACIÓN PRINCIPAL(TABLERO GENERAL DE 230 V) | SUBESTACIÓN PRINCIPAL | 0,000 | 11:23:01 | 11:29:01 | 6,00 | F | ETAPA 3 |
| ZONA A | AIN-SUBESTACIÓN PRINCIPAL(TABLERO GENERAL DE 460 V) | SUBESTACIÓN PRINCIPAL | 0,000 | 11:23:01 | 11:29:01 | 6,00 | F | ETAPA 1 |
| ZONA A | AIN-SUBESTACIÓN PRINCIPAL(TABLERO GENERAL DE 460 V) | SUBESTACIÓN PRINCIPAL | 0,000 | 11:23:01 | 11:29:01 | 6,00 | F | ETAPA 2 |
| ZONA A | AIN-SUBESTACIÓN PRINCIPAL(TABLERO GENERAL DE 460 V) | SUBESTACIÓN PRINCIPAL | 0,000 | 11:23:01 | 11:29:01 | 6,00 | F | ETAPA 3 |
| ZONA A | AIN-SUBESTACIÓN PRINCIPAL(TABLERO GENERAL DE 460 V) | SUBESTACIÓN PRINCIPAL | 0,000 | 11:23:01 | 11:29:01 | 6,00 | F | ETAPA 4 |
| ZONA A | AIN-SUBESTACIÓN PRINCIPAL(TABLERO GENERAL DE 460 V) | SUBESTACIÓN PRINCIPAL | 0,000 | 11:23:01 | 11:29:01 | 6,00 | F | ETAPA 5 |
| ZONA A | ALG-SUBESTACION 01(N1) | SUBESTACION 01 | 0,047 | 11:23:01 | 11:31:01 | 8,00 | DF | ETAPA 6 |
| ZONA A | ARE-QUELLOPATA(MOLIENDA Y STOCK PILE) | QUELLOPATA | 0,000 | 11:23:01 | 11:23:02 | 0,02 | F | ETAPA 6 |
| ZONA A | BCP-SED 1524(TG-N-220) | SED 1524 | 0,120 | 11:23:01 | 11:46:01 | 23,00 | F | ETAPA 6 |
| ZONA A | BVA-S.E. PUERTA C(ALIM. TGN2) | S.E. PUERTA C | 0,120 | 11:02:00 | 11:45:00 | 43,00 | F | ETAPA 6 |
| ZONA A | CMM-SUBESTACIÓN DESCARGA(TF-5010-02) | SUBESTACIÓN DESCARGA | 0,100 | 11:23:01 | 14:34:18 | 191,28 | F | ETAPA 6 |
| ZONA A | CMX-SUBESTACION-01(TG-01) | SUBESTACION-01 | 0,0222 | 11:23:01 | 12:01:01 | 38,00 | F | ETAPA 6 |
| ZONA A | CSL-SUBESTACION 1 - PLANTA 3(COMPRESOR 03) | SUBESTACION 1 - PLANTA 3 | 0,060 | 11:23:01 | 12:30:00 | 66,98 | F | ETAPA 6 |
| ZONA A | CSL-SUBESTACION 1 - PLANTA 3(MOLINO ESMALTE 1) | SUBESTACION 1 - PLANTA 3 | 0,0216 | 11:23:01 | 12:30:00 | 66,98 | F | ETAPA 6 |
| ZONA A | CSL-SUBESTACION 1 - PLANTA 3(MOLINO ESMALTE 2) | SUBESTACION 1 - PLANTA 3 | 0,0216 | 11:23:01 | 12:30:00 | 66,98 | F | ETAPA 6 |
| ZONA A | CSM-SE SAN VICENTE II(CELDAS SCV-OK8) | SE SAN VICENTE II | 0,000 | 11:23:01 | 11:23:02 | 0,02 | DF | ETAPA 6 |
| ZONA A | CTP-SUBESTACIÓN PRINCIPAL(PANEL E) | SUBESTACIÓN PRINCIPAL | 0,027 | 11:23:01 | 11:48:02 | 25,02 | F | ETAPA 6 |
| ZONA A | CTS-SE_440V(LARO18) | SE_440V | 0,0258 | 11:20:00 | 11:50:00 | 30,00 | F | ETAPA 6 |
| ZONA A | CVM-SUB ESTACION 1(TR2) | SUB ESTACION 1 | 0,030 | 11:23:01 | 11:51:29 | 28,47 | F | ETAPA 6 |
| ZONA A | ECO-SUB ESTACION ZONA A(COMPRESORES) | SUB ESTACION ZONA A | 0,000 | 11:23:01 | 11:23:02 | 0,02 | F | ETAPA 3 |
| ZONA A | ECO-SUB ESTACION ZONA A(COMPRESORES) | SUB ESTACION ZONA A | 0,000 | 11:23:01 | 11:23:02 | 0,02 | F | ETAPA 4 |
| ZONA A | ECO-SUB ESTACION ZONA A(COMPRESORES) | SUB ESTACION ZONA A | 0,000 | 11:23:01 | 11:23:02 | 0,02 | F | ETAPA 5 |
| ZONA A | ECO-SUB ESTACION ZONA A(COMPRESORES) | SUB ESTACION ZONA A | 0,000 | 11:23:01 | 11:23:02 | 0,02 | DF | ETAPA 6 |
| ZONA A | ECO-SUB ESTACION ZONA A(COMPRESORES) | SUB ESTACION ZONA A | 0,110 | 11:23:01 | 12:23:01 | 60,00 | DF | ETAPA 1 |
| ZONA A | ECO-SUB ESTACION ZONA A(COMPRESORES) | SUB ESTACION ZONA A | 0,130 | 11:23:01 | 12:23:01 | 60,00 | DF | ETAPA 2 |

| ZONA | SUMINISTRO | SUBESTACIÓN | POTENCIA (MW) | INICIO (HH:MM:SS) | FINAL (HH:MM:SS) | DURACIÓN (MIN) | FUNCIÓN | ETAPA |
|---|---|---|---|---|---|---|---|---|
| ZONA A | EDN1-CHANCAY(CY-51) | CHANCAY | 0,059 | 11:23:01 | 11:27:09 | 4,13 | F | ETAPA 6 |
| ZONA A | EDN1-HUANDOY(HY-06) | HUANDOY | 0,968 | 11:23:01 | 11:27:19 | 4,30 | F | ETAPA 6 |
| ZONA A | EDN1-HUARAL(HL-06) | HUARAL | 2,045 | 11:23:01 | 11:25:11 | 2,17 | F | ETAPA 6 |
| ZONA A | EDN1-HUARANGAL(NZ-04) | HUARANGAL | 1,788 | 11:23:01 | 11:26:46 | 3,75 | F | ETAPA 6 |
| ZONA A | EDN1-MARIATEGUI(MI-09) | MARIATEGUI | 1,859 | 11:23:01 | 11:25:36 | 2,58 | F | ETAPA 6 |
| ZONA A | EDN1-OQUENDO(O-07) | OQUENDO | 1,412 | 11:23:01 | 11:25:35 | 2,57 | F | ETAPA 6 |
| ZONA A | EDN1-TOMAS VALLE(TV-13) | TOMAS VALLE | 2,427 | 11:23:01 | 11:37:26 | 14,42 | F | ETAPA 6 |
| ZONA A | EDN1-VENTANILLA(V-12) | VENTANILLA | 1,857 | 11:23:01 | 11:26:26 | 3,42 | F | ETAPA 6 |
| ZONA A | ELC-S.E. CANGALLO(A4023) | S.E. CANGALLO | 0,175 | 11:23:01 | 11:31:25 | 8,40 | F | ETAPA 6 |
| ZONA A | ELC-S.E. HUANCAYO ESTE(A4241) | S.E. HUANCAYO ESTE | 1,286 | 11:23:01 | 11:30:59 | 7,97 | F | ETAPA 6 |
| ZONA A | ELN-CAYALTI(A2052) | CAYALTI | 2,940 | 11:23:01 | 11:44:01 | 21,00 | F | ETAPA 6 |
| ZONA A | EOR-BELLAVISTA(4615) | BELLAVISTA | 1,600 | 11:23:01 | 11:36:01 | 13,00 | F | ETAPA 6 |
| ZONA A | EPU-HUANCANE(4001) | HUANCANE | 0,290 | 11:23:01 | 11:25:54 | 2,88 | F | ETAPA 6 |
| ZONA A | ESE-CACHIMAYO(CA03) | CACHIMAYO | 1,221 | 11:23:01 | 11:27:42 | 4,68 | F | ETAPA 6 |
| ZONA A | ESE-URPIPATA(UP01) | URPIPATA | 0,871 | 11:23:01 | 11:28:03 | 5,03 | F | ETAPA 6 |
| ZONA A | EUC-SEP YARINACOCHA(N5) | SEP YARINACOCHA | 1,400 | 11:23:01 | 11:26:21 | 3,33 | F | ETAPA 6 |
| ZONA A | HID-S.E. PORVENIR(A3020) | S.E. PORVENIR | 4,730 | 11:23:01 | 11:25:17 | 2,27 | F | ETAPA 6 |
| ZONA A | HUD-S.E. RELAVES(K-08) | S.E. RELAVES | 1,170 | 11:23:01 | 11:36:02 | 13,02 | F | ETAPA 6 |
| ZONA A | JCK-SUB ESTACION 07(MT-1.4) | SUB ESTACION 07 | 0,0364 | 11:23:01 | 11:43:01 | 20,00 | F | ETAPA 6 |
| ZONA A | MAP-SUBESTACION N°3(L-3201) | SUBESTACION N°3 | 0,500 | 11:23:01 | 11:52:56 | 29,92 | F | ETAPA 6 |
| ZONA A | MCV-SAN CARLOS_SALA 11(HPGR 18_C2) | SAN CARLOS_SALA 11 | 3,790 | 11:23:01 | 11:42:01 | 19,00 | F | ETAPA 6 |
| ZONA A | MCV-SULFUROS_SALA 2(HPGR 33_C1) | SULFUROS_SALA 2 | 3,750 | 11:23:01 | 11:42:01 | 19,00 | F | ETAPA 6 |
| ZONA A | MEX-PLANTA DE INYECCIÓN(INY 07 (HAITIAN 4700)) | PLANTA DE INYECCIÓN | 0,070 | 11:23:01 | 11:46:01 | 23,00 | F | ETAPA 6 |
| ZONA A | MXT-CASA DE FUERZA(ESTACIÓN DE BOMBAS PS1 ( AREA 100)) | CASA DE FUERZA | 1,830 | 11:23:01 | 11:31:01 | 8,00 | F | ETAPA 6 |
| ZONA A | PAS-PLANTA CONCENTRADORA(MOLINO MARCY 6¿'X14') | PLANTA CONCENTRADORA | 0,300 | 10:35:00 | 11:24:00 | 49,00 | F | ETAPA 6 |
| ZONA A | PC3-SALA DE COMPRESORES(COMPRESOR 6) | SALA DE COMPRESORES | 0,000 | 11:23:01 | 11:52:00 | 28,98 | F | ETAPA 6 |
| ZONA A | POL-SUBESTACION 1(FCS-850) | SUBESTACION 1 | 0,110 | 11:23:01 | 11:28:01 | 5,00 | F | ETAPA 6 |
| ZONA A | PPL-SUBESTACION 2(LAMINADORA LCS-02) | SUBESTACION 2 | 0,035 | 11:23:01 | 11:43:01 | 20,00 | F | ETAPA 6 |
| ZONA A | PPL-SUBESTACION 2(LAMINADORA LCS-03) | SUBESTACION 2 | 0,027 | 11:23:01 | 11:43:01 | 20,00 | F | ETAPA 6 |
| ZONA A | QLL-FLOTACION(FLOTACION AGITADOR CLEANUP FILA 02) | FLOTACION | 1,000 | 11:23:01 | 11:35:46 | 12,75 | F | ETAPA 6 |
| ZONA A | QLL-FLOTACION(FLOTACION BLOWER CU MO) | FLOTACION | 1,500 | 11:23:01 | 11:35:46 | 12,75 | F | ETAPA 6 |
| ZONA A | SM2-SE 2(INTERRUPTOR - INCOMER) | SE 2 | 0,000 | 11:23:01 | 11:43:01 | 20,00 | F | ETAPA 6 |
| ZONA A | SMI-SE 1C(COMPRESOR 9) | SE 1C | 0,135 | 11:23:01 | 11:51:01 | 28,00 | F | ETAPA 6 |
| ZONA A | TAS-RECHAZO CARGA MAT (POWER LOGIC P5V20)(RC-MAT SEXTA ETAPA) | RECHAZO CARGA MAT (POWER LOGIC P5V20) | 0,0276 | 11:19:17 | 11:45:00 | 25,72 | F | ETAPA 6 |
| ZONA A | TAS-RECHAZO CARGA PIS (POWER LOGIC P5V20)(RC-PIS SEXTA ETAPA) | RECHAZO CARGA PIS (POWER LOGIC P5V20) | 0,000 | 11:19:17 | 11:45:00 | 25,72 | F | ETAPA 6 |
| ZONA A | TCA-SUBESTACIÓN 02(TABLERO DE ESTAMPADO DE TELAS MÁQUINAS EN GENERAL - MERSAN) | SUBESTACIÓN 02 | 0,0582 | 11:23:01 | 11:41:01 | 18,00 | F | ETAPA 4 |
| ZONA A | TNA-PLANTA INDEPENDENCIA(AMPLIACIÓN DE SALA DE CARGADORES) | PLANTA INDEPENDENCIA | 0,0872 | 07:23:42 | 12:25:32 | 62,52 | F | ETAPA 1 |

| ZONA | SUMINISTRO | SUBESTACIÓN | POTENCIA (MW) | INICIO (HH:MM:SS) | FINAL (HH:MM:SS) | DURACIÓN (MIN) | FUNCIÓN | ETAPA |
|---|---|---|---|---|---|---|---|---|
| ZONA A | TNF-SUBESTACIÓN A(A320) | SUBESTACIÓN A | 0,040 | 11:23:01 | 11:53:01 | 30,00 | F | ETAPA 6 |
| ZONA A | TNF-SUBESTACIÓN C(A620) | SUBESTACIÓN C | 0,100 | 11:23:01 | 11:53:01 | 30,00 | F | ETAPA 6 |
| ZONA A | VOL-SE AND NUEVO(VENTILADOR NV 800; VENTILADOR SUPERFICIE) | SE AND NUEVO | 1,580 | 11:23:01 | 11:57:01 | 34,00 | F | ETAPA 6 |
| ZONA A | XMS-SE 2(INTERRUPTOR - FEEDER) | SE 2 | 0,000 | 11:23:01 | 11:43:01 | 20,00 | F | ETAPA 6 |
| ZONA A | XMS-SE 6(INTERRUPTOR - FEEDER) | SE 6 | 0,000 | 11:23:01 | 11:43:01 | 20,00 | F | ETAPA 6 |
| ZONA A | YAN-SE PAMPALARGA(IN-102) | SE PAMPALARGA | 0,200 | 11:23:01 | 11:37:13 | 14,20 | F | ETAPA 6 |
| **TOTAL** | | | **44,1096** | | | | | |

## 13. OBSERVACIONES:

### 13.1 COES

- De acuerdo con lo indicado en el numeral 11.12 y el Anexo 2 del informe, las activaciones del ERACMF con un total de 44,1096 MW, se consideran incorrectas.

### 13.2 ORYGEN

- De acuerdo con lo mostrado en las Figuras 8 y 9 del numeral 11.9 del informe, se observa que las unidades G2 y G3 de la C.H. Huinco presentan una contribución activa a las oscilaciones de frecuencia del sistema. Este comportamiento también fue identificado previamente en el Informe COES/D/DO/SME-190-2025 de fecha 16.10.2025.

## 14. RECOMENDACIONES:

### 14.1 CT-AF A KALLPA GENERACIÓN

- Mediante un informe ampliatorio se solicita indicar el motivo por la señal BinOut (Set Point) de la unidad TV de la C.T. Kallpa se registró como inválida durante los periodos entre las 10:57 h - 11:02 h, 11:05 h - 11:10 h, y las 11:13 h - 11:33 h del 04.02.2026, lo cual, origina problemas para brindar la totalidad de RSF asignada y cumplir con la consigna del sistema AGC.

### 14.2 CT-AF A ORYGEN

- De acuerdo con lo indicado en el numeral 11.4 del informe se solicita indicar el motivo por el cual la unidad TG8 de la C.T. Santa Rosa no cumplió con el tiempo de arranque establecido

### 14.3 CT-AF A EGESUR

- De acuerdo con lo indicado en el numeral 11.4 del informe se solicita indicar el motivo por el cual las unidades de la C.T. Independencia no cumplieron con el tiempo de arranque establecido

## ANEXO 1

### Secuencia Cronológica

| Hora | S.E. / C.C. | Descripción |
|---|---|---|
| **Evento del 04.02.2026 a las 11:23:00h:** | | |
| 10:46 | CCO-COES[16] | Coordinó con el CC-ORYGEN incrementar la generación del G4 de la C.H. Huinco a máxima. |
| 10:47 | CCO-COES | Coordinó con CC-EGH para subir la C.H. Huanza a 80MW |
| 10:48 | CC-TCH[17] | Informó al CCO-COES que la C.T. Santo Domingo de los Olleros redujo aproximadamente 50 MW por actuación de la protección de mínimo vacío a las 10:35 h. |
| 10:49 | CC-GHU[18] | Informó al CCO-COES que desconectó el generador G1 de la C.H. Chaglla a las 10:45 h con 225 MW. |
| 10:52 | CCO-COES | Coordinó con el CC-ORYGEN el arranque de la unidad TG-8 de la C.T. Santa Rosa. |
| 10:53 | CCO-COES | Coordinó con CC-EGE arrancar todas las unidades de C.T. Independencia al máximo de su generación. |
| 10:54 | CC-ARP[19] | Informó al CCO-COES que tendrá carga plana durante unos minutos debido a que se encuentran en una parada operativa, lo que tardará aproximadamente 20 minutos. |
| 10:58 | CC-GHU | Informó el CCO-COES que la indisponibilidad de la G1 de la C.H. Chaglla se mantiene por al menos 30 minutos más hasta que terminen de revisar su sistema de las bombas de enfriamiento. |
| 10:59 | CCO-COES | Coordinó con el CC-ORYGEN la conexión del fuego directo de la C.T. Ventanilla a máxima generación. |
| 11:00 | CCO-COES | Coordinó con CC-EGH operar la C.H. Huanza a máxima generación. |
| 11:10 | CCO-COES | Coordinó con el CC-TER el arranque de la unidad TG-2 de la C.T. Aguaytía. |
| 11:14 | CC-EGS | Informó al CCO-COES que ya se encuentran operativas 3 unidades de C.T. Independencia y que unidad faltante ya se encuentra arrancando. El CCO-COES indicó que deben operar a máxima generación. |
| 11:17 | CC-ORYGEN | CCO-COES coordinó con el CC-ORYGEN subir a máxima generación la TG-8 de la C.T. Santa Rosa. |
| 11:18 | CC-ORY | CCO-COES coordinó con el CC-ORYGEN el arranque de la UTI-5 de la C.T. Santa Rosa. |
| 11:21 | CC-ORY | CCO-COES coordinó con el CC-ORYGEN el arranque de la UTI-6 de la C.T. Santa Rosa. |
| 11:23 | CC-TCH | Informó al CCO-COES que incrementó la generación de la C.T. Santo Domingo de los Olleros a máxima generación. |
| 11:24 | CC-EGS | Informó al CCO-COES que la TG1 de C.T. Independencia no va a poder arrancar debido a un mantenimiento correctivo. |
| 11:26 | CC-EUC | Consultó al CCO-COES si pueden recuperar su carga y que han perdido 1.4 MW. El CCO-COES le indicó recuperar toda su carga. |

[16] CCO-COES: Centro de Coordinación de la Operación del COES.
[17] CC-TCH: Centro de Control de TERMOCHILCA S.A.C.
[18] CC-GHU: Centro de Control de EMPRESA DE GENERACION HUALLAGA
[19] CC-ARP: Centro de Control de ARES PERU SAC

| Hora | S.E. / C.C. | Descripción |
|---|---|---|
| 11:26 | CC-EDN | Consultó al CCO-COES si pueden recuperar su carga y que han perdido 25 MW. CCO-COES le indica que puede recuperar toda su carga. |
| 11:26 | CC-EPU | Informó al CC-COES pérdida menor a 1 MW por actuación del ERACMF y coordinó recuperación total de carga. |
| 11:27 | CC-ESE | Informó al CCO-COES que tuvo activación del ERACMF etapa 6, CCO-COES le indicó que ya pueden normalizar su carga. |
| 11:27 | CC-MCV | Informó al CCO-COES que tuvieron interrupción de carga y CCO-COES le indicó que recuperen toda su carga. |
| 11:27 | CC-MXT | Informó pérdida aproximada de 2 MW por baja frecuencia y CCO-COES le indicó recuperar carga. |
| 11:29 | CC-ELC | Informó al CCO-COES interrupción de carga y CCO-COES le indicó que recuperen toda su carga. |
| 11:29 | CCO-COES | Coordinó con CC-KLP el normalizar su carga interrumpida correspondiente a su cliente PANASA. |
| 11:30 | CC-ORYGEN | Informó al CCO-COES que de las unidades UTI 5 y UTI 6 de la C.T. Santa Rosa sincronizaron a las 11:25 y a las 11:28 h. |
| 11:32 | CCO-COES | Coordinó con CC-CMA para recuperar su carga interrumpida de 2 MW. |
| 11:34 | CC-TER[20] | Informó al CCO-COES que la unidad TG-2 de la C.T. Aguaytía sincronizó con el SEIN a las 11:33 y operó inicialmente a carga mínima. |
| 11:35 | CCO-COES | Coordinó con CC-QLL el normalizar su carga interrumpida. |
| 11:35 | CCO-COES | Coordinó con CC-HUD (minera constancia) para recuperar su carga interrumpida. |
| 11:37 | CCO-COES | Coordinó con CC-ENG para recuperar la carga interrumpida de sus clientes libres |
| 11:37 | CC-GHU | Informó al CCO-COES que el G1 de la C.H. Chaglla permanecería indisponible aproximadamente 3 horas por mantenimiento correctivo. |
| 11:39 | CCO-COES | Coordinó con CC-TER subir a máxima generación la C.T. Aguaytía. |
| 11:44 | CCO-COES | Informó a CC-CNP [21] que ya pueden recuperar su carga interrumpida, y que se había enviado un correo a las 11:35 h a los agentes autorizando el normalizar sus cargas. |

[20] CC-TER: Centro de Control de TERMOSELVA.
[21] CC-CNP: Centro de Control de CEMENTOS PACASMAYO.

# ANEXO 2

## Evaluación de actuación del ERACMF por empresa en Formato F10.

### EMPRESA ALGODONERA S.A.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | P14331A2M0438J | SCHNEIDER ELECTRIC | MICOMP143 | 39673990 | SUBESTACION 01 | 10.0 | N1 | 3AF1541-2K1 | 20/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | P14331A2M0438J | SCHNEIDER ELECTRIC | MICOMP143 | 39673990 | SUBESTACION 01 | 10.0 | N1 | 3AF1541-2K2 | 20/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | P14331A2M0438J | SCHNEIDER ELECTRIC | MICOMP143 | 39673990 | SUBESTACION 01 | 10.0 | N1 | 3AF1541-2K3 | 20/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | P14331A2M0438J | SCHNEIDER ELECTRIC | MICOMP143 | 39673990 | SUBESTACION 01 | 10.0 | N1 | 3AF1541-2K4 | 20/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | P14331A2M0438J | SCHNEIDER ELECTRIC | MICOMP143 | 39673990 | SUBESTACION 01 | 10.0 | N1 | 3AF1541-2K5 | 20/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | P14331A2M0438J | SCHNEIDER ELECTRIC | MICOMP143 | 39673990 | SUBESTACION 01 | 10.0 | N1 | 3AF1541-2K6 | 20/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | 0.047 | 04/02/2026 11:22:10 | 04/02/2026 11:30:10 | 0:08:00,0 | DF | NINGUNA | INCORRECTA | ORYGEN PERU S.A.A. |

### COMPANIA MINERA ARES S.A.C.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | RE-A07 | ABB | REF630 | 1VHR91146347 | QUELLOPATA | 10.0 | CAMPAMENTO | A07 | 30/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CELEPSA |
| Zona A | RE-A27 | ABB | REX640 | 1VHR81034035 | QUELLOPATA | 10.0 | CIRCUITO MINA V | A27 | 30/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CELEPSA |
| Zona A | RE-A06 | ABB | REF620 | 1VHR91146523 | QUELLOPATA | 10.0 | DETOXIFICACIÓN; RELAVE Y PLANTA DE OXIGENO | A06 | 30/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CELEPSA |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | RE-A17 | ABB | REF630 | 1VHR91146350 | QUELLOPATA | 10.0 | CHANCADORA Y AGUA FRESCA | A17 | 30/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | CELEPSA |
| Zona A | RE-A20 | ABB | REF630 | 1VHR91146348 | QUELLOPATA | 10.0 | MINA I | A20 | 30/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | CELEPSA |
| Zona A | RE-A05 | ABB | REF620 | 1VHR91146526 | QUELLOPATA | 10.0 | MERRIL CROWE Y PLANTA DORÉ | A05 | 30/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | CELEPSA |
| Zona A | RE-A29 | ABB | REX640 | 1VHR81034037 | QUELLOPATA | 10.0 | CIRCUITO MINA IV | A29 | 30/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | | CELEPSA |
| Zona A | RE-A03 | ABB | REF620 | 1VHR91146520 | QUELLOPATA | 10.0 | MOLIENDA Y STOCK PILE | A03 | 30/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | 0.0 | 04/02/2026 11:22:00 | 04/02/2026 11:22:00 | 0:00:00,0 | F | NINGUNA | INCORRECTA | | CELEPSA |

## COMPAÑIA MINERA ARGENTUM SA

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | SEL-751 | SEL | 7510S1ACA0X0X85BC30 | 3251325123 | SACRACANCHA | 4.16 | Campamentos Alpamina | LS VL-17F25B06 | 30/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | FENIX POWER PERU |
| Zona A | REF541-M1 | ABB | REF541 | 235909 | 075 - MANUELITA | 4.16 | Compresoras KA35; KA 37; KA40 | SINE | 23/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | FENIX POWER PERU |
| Zona A | REF541-EG1 | ABB | REF541 | 274637 | SSEE122-GOLF | 0.46 | Compresora AC 30 | GE SKLA36AT1200 | 23/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | FENIX POWER PERU |
| Zona A | 52F3 | GE | 750-P1-G1-S1-H1-A20-R-E | B2711038 | 123 - GOLF | 4.16 | Mina Codiciada | MICO | 23/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | FENIX POWER PERU |
| Zona A | REF541-M1 | ABB | REF541 | 235909 | 075 - MANUELITA | 4.16 | Planta de concreto; RB500 | MASU | 23/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | FENIX POWER PERU |

## ALTEX TRADING S.A.C. Chimbote

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | P3U306AAA1BCAA | SCHNEIDER ELECTRIC | P3U30 | SM2527412600871 | Megaplaza Chimbote | 0.38 | TGN-5 | INTERRUPTOR GENERAL | 10/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ELECTROSUR MEDIO |

## BANCO DE CREDITO DEL PERU

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | UBFÑAAAAABAZANNBXD | ABB | REF630E_D | 1VHR91415880 | SED1524 | 0.22 | TG-E-220 | TG-E-220 | 29/12/2018 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | UBFÑAAAAABAZANNBXD | ABB | REF630E_D | 1VHR91415880 | SSEE01 | 0.48 | Celda 1 | Celda 1 | 29/12/2018 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | UBFÑAAAAABAZANNBXD | ABB | REF630E_D | 1VHR91415880 | SED1524 | 10.0 | TG-E-480 | TG-E-480 | 29/12/2018 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | UBFÑAAAAABAZANNBXD | ABB | REF630E_D | 1VHR91415880 | SED1524 | 0.48 | TG-Chiller | TG-Chiller | 29/12/2018 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | UBFÑAAAAABAZANNBXD | ABB | REF630E_D | 1VHR91415880 | SSEE04 | 10.0 | Celda 4 | Celda 4 | 29/12/2018 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | UBFÑAAAAABAZANNBXD | ABB | REF630E_D | 1VHR91415880 | SSEE02 | 10.0 | Celda 2 | Celda 2 | 29/12/2018 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | UBFÑAAAAABAZANNBXD | ABB | REF630E_D | 1VHR91415880 | SED1524 | 0.22 | TG-N-220 | TG-N-220 | 29/12/2018 | Etapa 6 | 59.5 | 60.0 | | | | 0.12 | 04/02/2026 11:22:00 | 04/02/2026 11:45:00 | 0:23:00,0 | F | NINGUNA | INCORRECTA | ENGIE ENERGIA PERU |

## BANCO CONTINENTAL

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | RELE 630 | ABB | REF 630 | 1VHR91436684 | S.E. PUERTA C | 0.38 | ALIM. TGN2 | TAB TGN 2 ITM Q4 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | RELE 630 | ABB | REF 630 | 1VHR91436684 | S.E. PUERTA C | 0.38 | ALIM. TGN2 | TAB TGN 2 ITM Q2 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | RELE 630 | ABB | REF 630 | 1VHR91436684 | S.E. PUERTA C | 0.38 | ALIM. TGN2 | TAB TGN 2 ITM Q5 | 01/01/2026 | Etapa 6 | 59.5 | 60.0 | | | | 0.12 | 04/02/2026 11:02:00 | 04/02/2026 11:45:00 | 0:43:00,0 | F | NINGUNA | INCORRECTA | ORYGEN PERU S.A.A. |

## INMOBILIARIA BOTAFOGO S.A.C.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL | TIEMPO UMBRAL | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. | DEMANDA INTERR. | INICIO DD/MM/YYYY HH:MM: | FINAL DD/MM/YYYY HH:MM: | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | (Hz) | (seg) | | | (seg) | (MW) | SS | SS | | | RELÉ | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | P3U306AAA1BCAA | SCHNEIDER ELECTRIC | P3U30 | SM2527412600873 | Para que chincha | 0.4 | TG-TR1 | INTERRUPTOR GENERAL | 10/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |

## OTERRA S.A.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | F01 | SIEMENS | 7SJ81 | BM2310012207 | SE OTERRA | 0.23 | OFICINA 220VAC-PRODUCCION | TG-230VC-118 | 22/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | F01 | SIEMENS | 7SJ81 | BM2310012207 | SE OTERRA | 0.4 | TABLERO DE BOMBAS ALTERNADAS | TG-400VC-115 | 22/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | F01 | SIEMENS | 7SJ81 | BM2310012207 | SE OTERRA | 0.4 | MOLINO DE PINES | TG-400VC-119 | 22/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | F01 | SIEMENS | 7SJ81 | BM2310012207 | SE OTERRA | 0.23 | TABLERO ALMACEN NUEVO | TG-230VC-117 | 22/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | F01 | SIEMENS | 7SJ81 | BM2310012207 | SE OTERRA | 0.23 | TG LABORATORIO CARMIN | TG-230VC-111 | 22/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | F01 | SIEMENS | 7SJ81 | BM2310012207 | SE OTERRA | 0.4 | RIFFER PRODUCCION | TG-400VC-104 | 22/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | F01 | SIEMENS | 7SJ81 | BM2310012207 | SE OTERRA | 0.23 | CAMARA CAMOTE MOLIENDA | TG-230VC-115 | 22/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |

## CATALINA HUANCA SOCIEDAD MINERA S.A.C.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | SEL-2 | SEL | SEL-351A | 3172770062 | Subestacion Bunker | 0.44 | L-6009 | IA-CH | 24/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.35 | | | | | | | | CELEPSA |
| Zona A | SEL-2 | SEL | SEL-351A | 3172770062 | Subestacion Bunker | 0.44 | L-6009 | IA-MK | 24/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.35 | | | | | | | | CELEPSA |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | GE-MU-3 | GE MULTILIN | F-650 | 82.340.601 | Subestacion San Jeronimo | 4.16 | L-6009 | IA-FL | 24/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.35 | | | | | | | | CELEPSA |
| Zona A | SEL-1 | SEL | SEL-751 | 3173170308 | Subestacion Bolivar | 4.16 | L-6009 | IA-SV | 24/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | CELEPSA |

## COMPAÑIA MINERA MISKI MAYO SRL.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | +L01 | SIEMENS | 7SJ6221 | 906065023 | Subestación Concentradora | 4.16 | TR-1090-01 M1 | INTL01 | 18/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | +L02 | SIEMENS | 7SJ6221 | 906066685 | Subestación Concentradora | 4.16 | TR-1090-01 M2 | INTL02 | 18/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | +J06 | SIEMENS | 7SJ6221 | 906066684 | Subestación Secado | 22.9 | Captacion Agua Mar | INTJ06 | 18/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | +J11 | SIEMENS | 7SJ6221 | 906065012 | Subestación Bayovar | 22.9 | Desalinizadora | INTJ11 | 18/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | +J06 | SIEMENS | 7SJ6221 | 906066686 | Subestación Descarga | 22.9 | TF-5010-02 | INTJ06 | 18/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | 0.1 | 04/02/2026 11:23:15 | 04/02/2026 14:34:32 | 3:11:17,0 | F | NINGUNA | INCORRECTA | KLP - KALLPA GENERACIÓN S.A. |

## INDUSTRIAL CROMOTEX S.A.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | SEL-351 | SEL | 035163A4E54222 | 1141960063 | SUBESTACION-01 | 0.22 | TG-01 | MCT-01 | 04/12/2018 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | SEL-351 | SEL | 035163A4E54222 | 1141960063 | SUBESTACION-01 | 0.22 | TG-01 | MCT-02 | 04/12/2018 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | SEL-351 | SEL | 035163A4E54222 | 1141960063 | SUBESTACION-01 | 0.22 | TG-01 | MCT-03 | 04/12/2018 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | SEL-351 | SEL | 035163A4E54222 | 1141960063 | SUBESTACION-01 | 0.22 | TG-01 | MCT-04 | 04/12/2018 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | ORYGEN PERU S.A.A. |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | SEL-351 | SEL | 035163A4E54222 | 1141960063 | SUBESTACION-01 | 0.22 | TG-01 | MCT-09 | 04/12/2018 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | SEL-351 | SEL | 035163A4E54222 | 1141960063 | SUBESTACION-01 | 0.22 | TG-01 | MRT-05 | 04/12/2018 | Etapa 6 | 59.5 | 60.0 | 0.0 | 0.0 | 0.0 | 0.0222 | 04/02/2026 11:22:00 | 04/02/2026 12:00:00 | 0:38:00,0 | F | NINGUNA | INCORRECTA | ORYGEN PERU S.A.A. |

## CERAMICA SAN LORENZO S.A.C.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | RMF1 | ABB | REF630 | 1VHR91110319 | Subestacion 2 - Planta 1 | 0.46 | MOLINO MTD340 N° 1 | F2-9-CC044/1 | 30/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RMF1 | ABB | REF630 | 1VHR91110319 | Subestacion 2 - Planta 1 | 0.46 | MOLINO MTD050 N° 2 | F2-15-CF280/2 | 30/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RMF2 | SCHNEIDER | MICON P143 | 36107531/01/12 | Subestacion 1 - Planta 3 | 0.46 | CHANCADORA | TFC1-01-CH | 30/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RMF1 | ABB | REF630 | 1VHR91110319 | Subestacion 2 - Planta 1 | 0.46 | Molino MTD340 N° 2 | F2-10-CC044/2 | 30/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RMF1 | ABB | REF630 | 1VHR91110319 | Subestacion 2 - Planta 1 | 0.46 | Molino MTD340 N° 3 | F2-11-CC044/3 | 30/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RMF2 | SCHNEIDER | MICON P143 | 36107531/01/12 | Subestacion 1 - Planta 3 | 0.46 | MOLINO ESMALTE # 4 | TD1-01-ME-17 | 30/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RMF1 | ABB | REF630 | 1VHR91110319 | Subestacion 2 - Planta 1 | 0.46 | Molino MTD340 N° 4 | F2-12-CC044/4 | 30/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RMF1 | ABB | REF630 | 1VHR91110319 | Subestacion 2 - Planta 1 | 0.46 | Molino MTD340 N° 5 | F2-I-1-CC044/5 | 30/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RMF1 | ABB | REF630 | 1VHR91110319 | Subestacion 2 - Planta 1 | 0.46 | Molino MTD340 N° 6 | F2-I-2-CC044/6 | 30/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RMF1 | ABB | REF630 | 1VHR91110319 | Subestacion 4 - Planta 2 | 0.46 | Molienda Seca | CEXXXP | 30/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RMF2 | SCHNEIDER | MICON P143 | 36107531/01/12 | Subestacion 1 - Planta 3 | 0.46 | MOLINO MRV | CDC-2-3 | 30/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | RMF2 | SCHNEIDER | MICON P143 | 36107531/01/12 | Subestacion 1 - Planta 3 | 0.46 | MOLINO ESMALTE # 1 | TD1-01-ME-2 | 30/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | 0.0216 | 04/02/2026 11:23:00 | 04/02/2026 12:30:00 | 1:07:00,0 | F | NINGUNA | INCORRECTA | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RMF2 | SCHNEIDER | MICON P143 | 36107531/01/12 | Subestacion 1 - Planta 3 | 0.46 | MOLINO ESMALTE # 2 | TD1-01-ME-1 | 30/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | 0.0216 | 04/02/2026 11:23:00 | 04/02/2026 12:30:00 | 1:07:00,0 | F | NINGUNA | INCORRECTA | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RMF2 | SCHNEIDER | MICON P143 | 36107531/01/12 | Subestacion 1 - Planta 3 | 0.46 | COMPRESOR # 03 | TFC1-01-C3 | 30/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | 0.06 | 04/02/2026 11:23:00 | 04/02/2026 12:30:00 | 1:07:00,0 | F | NINGUNA | INCORRECTA | KLP - KALLPA GENERACIÓN S.A. |

## CENTURYLINK PERU S.A.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | P14391SABM0B38L | Schneider Electric | MiCOM P143 | 39702124 | INTERRUPTOR GENERAL | 22.9 | JLJ3935043 | S2C1410499 | 26/10/2019 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EGEMSA |

## CORPORACION TEXTIL DEL SUR

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | UBFNAAAAABAZFNNBXD | ABB | REF630 | 1VHR91599263 | SE_220V | 0.22 | Tejeduria | ABB 630 | 18/11/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | FENIX POWER PERU |
| Zona A | UBFNAAAAABAZFNNBXD | ABB | REF630 | 1VHR91599263 | SE_440V | 0.44 | Osmosis | ABB 225 | 18/11/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | FENIX POWER PERU |
| Zona A | UBFNAAAAABAZFNNBXD | ABB | REF630 | 1VHR91599263 | SE_440V | 0.44 | Laro18 | ABB 80 | 18/11/2025 | Etapa 6 | 59.5 | 60.0 | | | | 0.0258 | 04/02/2026 11:20:00 | 04/02/2026 11:50:00 | 0:30:00,0 | F | NINGUNA | INCORRECTA | FENIX POWER PERU |

## CARTONES VILLA MARINA S.A.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | UBFNABABABAZAANBXB | ABB | REF630 | 1VHR91069411 | SUBESTACION 1 | 22.9 | TR5 | C4 | 20/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | UBFNABABABAZAANBXB | ABB | REF630 | 1VHR91069411 | SUBESTACION 1 | 22.9 | TR5 | C3 | 20/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona | UBFNABABABAZAANBXB | ABB | REF630 | 1VHR91069411 | SUBESTA | 22.9 | TR2 | C1, C4 | 20/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | | | | | CION 1 | | | | | | | | | | | | | | | | | | GENERACIÓN S.A. |
| Zona A | UBFNABABABAZAANBXB | ABB | REF630 | 1VHR91069411 | SUB ESTACION 1 | 22.9 | TR1 | C6 | 20/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | UBFNABABABAZAANBXB | ABB | REF630 | 1VHR91069411 | SUB ESTACION 1 | 22.9 | TR3 | C1, C4 | 20/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | UBFNABABABAZAANBXB | ABB | REF630 | 1VHR91069411 | SUB ESTACION 1 | 22.9 | TR2 | C3 | 20/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | 0.03 | 04/02/2026 11:23:09 | 04/02/2026 11:51:37 | 0:28:28,0 | F | NINGUNA | INCORRECTA | KLP - KALLPA GENERACIÓN S.A. |

## Inmobiliaria Eburns s.a.c.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | 6AAA1BCAA | SCHNEIDER ELECTRIC | P3U30 | SM2527412600880 | MEGAPLAZA JAEN | 0.38 | TGN-1 | INTERRUPTOR GENERAL | 13/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ELECTROSUR MEDIO |

## PLUZ ENERGIA PERU S.A.A

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | HY-04 | SIEMENS | 7SJ85 | BM1807010839 | HUANDOY | 10.0 | HY-04 | 1VC1BE00029513 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | U-01 | SIEMENS | 7SJ85 | BM1807011226 | UNI | 10.0 | U-01 | V-004122-20-05 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | TV-20 | SEL | SEL351 | 1122350173 | TOMAS VALLE | 10.0 | TV-20 | V 412-06154 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | PA-07 | SEL | SEL751 | 3232005166 | PANDO | 10.0 | PA-07 | 82-29.778-10 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CH-11 | SEL | SEL351 | 1161930144 | CHAVARRIA | 10.0 | CH-11 | 2001-570506.33-05 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | NJ-11 | SIEMENS | 7SJ85 | BM1807010788 | NARANJAL | 10.0 | NJ-11 | V19-0259 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | Q-26 | SEL | SEL351 | 1141920176 | PERSHING | 10.0 | Q-26 | 1VC1BE00028643 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | F-12 | SEL | SEL751 | 3232025427 | SANTA MARINA | 10.0 | F-12 | D2SE0222029 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona | T-24 | SEL | SEL351 | 3151390017 | TACNA | 10.0 | T-24 | 56570 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | | | | | | | | | | | | | | | | | | | | | | | PERU |
| Zona A | MA-17 | SEL | SEL351 | 1130110013 | MARANGA | 10.0 | MA-17 | 09-00147-13-07 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | MS-02 | SIEMENS | 7SJ85 | BM1807010815 | MALVINAS | 10.0 | MS-02 | V-014277-20-004 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | K-28 | SEL | SEL351 | 1141950112 | BARSI | 10.0 | K-28 | 1VC1BE00032154 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CV-12 | SIEMENS | 7SJ621 | BF1109148484 | CAUDIVILLA | 10.0 | CV-12 | V10-0690 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | MA-20 | SEL | SEL351 | 1130110020 | MARANGA | 10.0 | MA-20 | 09-00147-13-03 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | FA-05 | SIEMENS | 7SJ85 | BM1807010851 | FILADELFIA | 10.0 | FA-05 | V-014277-10-004 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CG-06 | SEL | SEL751 | 3212140400 | CANTOGRANDE | 10.0 | CG-06 | 2001-570506.31-01 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | HL-04 | SEL | SEL751 | 3212140378 | HUARAL | 10.0 | HL-04 | 7003281-4004-99 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | HY-02 | SIEMENS | 7SJ85 | BM1807010920 | HUANDOY | 10.0 | HY-02 | 1VC1BE00029514 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | J-05 | SIEMENS | 7SJ85 | BM1807011229 | JICAMARCA | 10.0 | J-05 | 348 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | MI-10 | SIEMENS | 7SJ85 | BM1807011244 | MARIATEGUI | 10.0 | MI-10 | 2003067110-20-003 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | HY-07 | EFACEC | TPUS430 | 946393 | HUANDOY | 10.0 | HY-07 | 2001108644-10-001 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | NJ-03 | SIEMENS | 7SJ85 | BM1807010794 | NARANJAL | 10.0 | NJ-03 | V-130660 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | NJ-13 | SIEMENS | 7SJ85 | BM1807010845 | NARANJAL | 10.0 | NJ-13 | 140 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CG-09 | SEL | SEL351A | 2008178268 | CANTOGRANDE | 10.0 | CG-09 | 09-00147-11-03 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | U-10 | SIEMENS | 7SJ85 | BM1807011247 | UNI | 10.0 | U-10 | V-007728-20-05 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | U-12 | SIEMENS | 7SJ85 | BM1807010914 | UNI | 10.0 | U-12 | V-007728-20-09 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CY-02 | SEL | SEL751 | 3211300410 | CHANCAY | 10.0 | CY-02 | 7003281-4014-99 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | Q-24 | SEL | SEL351 | 1122210174 | PERSHING | 10.0 | Q-24 | V-007728-20-11 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CG-03 | SEL | SEL751 | 3212140401 | CANTOGRANDE | 10.0 | CG-03 | 2001-570506.31-05 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |

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| Zona A | CG-16 | SIEMENS | 7SJ85 | BM1807011238 | CANTOGRANDE | 10.0 | CG-16 | 09-00147-02-15 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | W-02 | SIEMENS | 7SJ621 | BF1109148475 | ZAPALLAL | 10.0 | W-02 | G29433015 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | N-05 | SIEMENS | 7SJ85 | BM1809008484 | ANCON | 10.0 | N-05 | V11-0762 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | FA-04 | SIEMENS | 7SJ85 | BM1807010872 | FILADELFIA | 10.0 | FA-04 | V-014277-10-003 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | FA-06 | SIEMENS | 7SJ85 | BM1807010842 | FILADELFIA | 10.0 | FA-06 | 2002470648-10-002 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | PA-02 | SEL | SEL751 | 3231995544 | PANDO | 10.0 | PA-02 | 82-29.778-3 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | J-09 | SIEMENS | 7SJ85 | BM1807010899 | JICAMARCA | 10.0 | J-09 | 1VC1BE00052976 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | O-02 | ABB | REF620 | 1VHR91526396 | OQUENDO | 10.0 | O-02 | 7 00048-4-6 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | O-20 | SEL | SEL751 | 3211300441 | OQUENDO | 10.0 | O-20 | V19 - 0261 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | M-26 | SEL | SEL351 | 3151390016 | MIRONES | 10.0 | M-26 | 720017192-4026-00 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | HY-01 | SIEMENS | 7SJ85 | BM1601003606 | HUANDOY | 10.0 | HY-01 | 1VC1BE00029515 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | MA-16 | SEL | SEL351A | 2008178247 | MARANGA | 10.0 | MA-16 | 82-29.778-13 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | MI-08 | SIEMENS | 7SJ85 | BM1807011205 | MARIATEGUI | 10.0 | MI-08 | 2002470648-10-008 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | NJ-04 | SIEMENS | 7SJ85 | BM1807010773 | NARANJAL | 10.0 | NJ-04 | V-180658 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | N-03 | SIEMENS | 7SJ85 | BM1807010896 | ANCON | 10.0 | N-03 | V11-0763 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | I-09 | SEL | SEL351 | 1130110011 | INFANTAS | 10.0 | I-09 | 139 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | HY-08 | EFACEC | TPUS430 | 946392 | HUANDOY | 10.0 | HY-08 | 2001108644-10-004 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | V-09 | SEL | SEL351 | 3151400022 | VENTANILLA | 10.0 | V-09 | V-014277-20-010 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | V-10 | SEL | SEL351 | 3151400001 | VENTANILLA | 10.0 | V-10 | V-014277-20-014 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | Z-10 | SEL | SEL351 | 1130110010 | ZARATE | 10.0 | Z-10 | V-007728-30-04 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona | P-18 | ABB | REF630 | 1VHR91070878 | SANTA.ROSA | 10.0 | P-18 | 0112260010-31 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA |

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| A | | | | | ANTIGUA | | | | | | | | | | | | | | | | | | PERU |
| Zona A | P-13 | SEL | SEL351 | 2009181180 | SANTA.ROSA ANTIGUA | 10.0 | P-13 | 0112260010-1 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CV-16 | SEL | SEL351 | 3151400006 | CAUDIVILLA | 10.0 | CV-16 | V-014277-20-015 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CV-01 | SEL | SEL351 | 1122210180 | CAUDIVILLA | 10.0 | CV-01 | 97091743 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | NJ-10 | SIEMENS | 7SJ85 | BM1807010779 | NARANJAL | 10.0 | NJ-10 | V-180660 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | M-25 | SEL | SEL351 | 3151400026 | MIRONES | 10.0 | M-25 | 720017192-4027-00 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CV-03 | SEL | SEL351 | 1122210181 | CAUDIVILLA | 10.0 | CV-03 | 97081556 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | F-13 | SEL | SEL751 | 3232055067 | SANTA MARINA | 10.0 | F-13 | D2SE0912187 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | FA-02 | SIEMENS | 7SJ85 | BM1601003657 | FILADELFIA | 10.0 | FA-02 | V-01481-10-001 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | FA-03 | SIEMENS | 7SJ85 | BM2209009109 | FILADELFIA | 10.0 | FA-03 | V-014812-10-002 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | HL-02 | SEL | SEL751 | 3212140393 | HUARAL | 10.0 | HL-02 | 7003281-4001-99 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | J-06 | SIEMENS | 7SJ85 | BM1807010803 | JICAMARCA | 10.0 | J-06 | 157 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | J-07 | SEL | SEL351 | 3151400003 | JICAMARCA | 10.0 | J-07 | 1VC1BE00052074 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | MA-14 | ABB | REF630 | 1VHR9107088 0 | MARANGA | 10.0 | MA-14 | E2SE1006548 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | NJ-01 | SIEMENS | 7SJ85 | BM1807011211 | NARANJAL | 10.0 | NJ-01 | V-180655 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | P-33 | SEL | SEL351 | 2009181202 | SANTA.ROSA ANTIGUA | 10.0 | P-33 | 0112260010-6 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | Q-03 | SEL | SEL351 | 3151390013 | PERSHING | 10.0 | Q-03 | V419-03367 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | M-15 | SEL | SEL351 | 3151390018 | MIRONES | 10.0 | M-15 | 720017192-4017-00 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | TV-09 | SIEMENS | 7SJ621 | BF1109119853 | TOMAS VALLE | 10.0 | TV-09 | 313 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | Z-17 | SEL | SEL351 | 3151390022 | ZARATE | 10.0 | Z-17 | 1042217876 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | V-11 | SIEMENS | 7SJ85 | BM1807010908 | VENTANILLA | 10.0 | V-11 | 2002470648-10-001 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |

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| Zona A | CV-15 | SEL | SEL351 | 1141960061 | CAUDIVILLA | 10.0 | CV-15 | V-007728-20-12 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CV-07 | SEL | SEL351 | 1130110016 | CAUDIVILLA | 10.0 | CV-07 | 97091744 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | K-15 | SEL | SEL751 | 3233245415 | BARSI | 10.0 | K-15 | 111009 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | IE-04 | EFACEC | TPUS430 | 949955 | IZAGUIRRE | 10.0 | IE-04 | 18VCB00983 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | Z-20 | SIEMENS | 7SJ85 | BM1807009846 | ZARATE | 10.0 | Z-20 | 2002470648-10-003 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | I-06 | SEL | SEL351 | 1122210177 | INFANTAS | 10.0 | I-06 | 180 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | I-11 | SEL | SEL351 | 1122210163 | INFANTAS | 10.0 | I-11 | 175 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | W-07 | ABB | REF630 | 1VHR9107088 1 | ZAPALLAL | 10.0 | W-07 | V 412-06157 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | M-11 | SEL | SEL351 | 1161930119 | MIRONES | 10.0 | M-11 | 720017192-4011-00 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | J-04 | SIEMENS | 7SJ85 | BM1807010782 | JICAMARCA | 10.0 | J-04 | 134 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CV-05 | SEL | SEL351 | 1130110007 | CAUDIVILLA | 10.0 | CV-05 | 97081552 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | I-14 | SEL | SEL351 | 1122210162 | INFANTAS | 10.0 | I-14 | 343 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | P-29 | ABB | REF630 | 1VHR9107086 3 | SANTA.ROSA ANTIGUA | 10.0 | P-29 | 0112260010-4 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | NJ-06 | SIEMENS | 7SJ85 | BM1807010821 | NARANJAL | 10.0 | NJ-06 | V-180663 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | Q-14 | ABB | DPU2000R | 970371 | PERSHING | 10.0 | Q-14 | 1VC1CC00037255 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | T-08 | SEL | SEL351 | 3151400010 | TACNA | 10.0 | T-08 | 56678 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | M-14 | SEL | SEL351 | 3151400019 | MIRONES | 10.0 | M-14 | 720017192-4016-00 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | U-04 | SIEMENS | 7SJ85 | BM1807010800 | UNI | 10.0 | U-04 | V-004122-20-02 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | U-08 | SIEMENS | 7SJ85 | BM1807010860 | UNI | 10.0 | U-08 | V-006858-20-02 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | NJ-15 | SIEMENS | 7SJ85 | BM1807011232 | NARANJAL | 10.0 | NJ-15 | 148 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona | MS-08 | SEL | SEL751 | 3241225632 | MALVINAS | 10.0 | MS-08 | V-014277-20-001 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA |

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| A | | | | | | | | | | | | | | | | | | | | | | | PERU |
| Zona A | M-10 | SEL | SEL351 | 3151400021 | MIRONES | 10.0 | M-10 | 720017192-4028-00 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | M-13 | SEL | SEL351 | 1130110004 | MIRONES | 10.0 | M-13 | 720017192-4015-00 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | K-26 | SEL | SEL351 | 1141950109 | BARSI | 10.0 | K-26 | 1VC1BE00032151 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CH-05 | SEL | SEL351 | 1161930135 | CHAVARRIA | 10.0 | CH-05 | 2001-570506.33-03 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | H-03 | SEL | SEL751 | 3212140391 | HUACHO | 10.0 | H-03 | AA00023819 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CG-11 | SEL | SEL351A | 2008178248 | CANTOGRANDE | 10.0 | CG-11 | 09-00147-02-04 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | MI-07 | EFACEC | TPUS430 | 946390 | MARIATEGUI | 10.0 | MI-07 | 2001213522-10-002 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | ID-05 | ABB | REX640 | 1VHR81027073 | INDUSTRIAL | 10.0 | ID-05 | V19 - 0786 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | H-04 | SEL | SEL751 | 3212140375 | HUACHO | 10.0 | H-04 | AA00023811 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | I-15 | SEL | SEL351A | 2008178264 | INFANTAS | 10.0 | I-15 | 184 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | I-20 | SEL | SEL351A | 2008178256 | INFANTAS | 10.0 | I-20 | 167 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | IE-08 | EFACEC | TPUS430 | 949950 | IZAGUIRRE | 10.0 | IE-08 | 18VCB00982 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CV-04 | SEL | SEL351 | 1122210154 | CAUDIVILLA | 10.0 | CV-04 | 97081555 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CG-13 | SEL | SEL351A | 2008178270 | CANTOGRANDE | 10.0 | CG-13 | 09-00147-02-09 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CY-51 | SEL | SEL351 | 1141950114 | CHANCAY | 20.0 | CY-51 | 1VCBE00032144 | 01/01/2026 | Etapa 6 | 59.5 | 60.0 | 0.0 | 0.0 | 0.0 | 0.059 | 04/02/2026 11:23:16 | 04/02/2026 11:27:24 | 0:04:08,0 | F | NINGUNA | INCORRECTA | AGUAS Y ENERGIA PERU |
| Zona A | HY-06 | SIEMENS | 7SJ85 | BM1601002588 | HUANDOY | 10.0 | HY-06 | V-014277-20-019 | 01/01/2026 | Etapa 6 | 59.5 | 60.0 | 0.0 | 0.0 | 0.0 | 0.968 | 04/02/2026 11:23:16 | 04/02/2026 11:27:34 | 0:04:18,0 | F | NINGUNA | INCORRECTA | AGUAS Y ENERGIA PERU |
| Zona A | MI-01 | EFACEC | TPUS430 | 946382 | MARIATEGUI | 10.0 | MI-01 | 2000851607-20-006 | 01/01/2026 | Etapa 6 | 59.5 | 60.0 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | MI-09 | SIEMENS | 7SJ85 | BM1807011208 | MARIATEGUI | 10.0 | MI-09 | 2003067110-20-002 | 01/01/2026 | Etapa 6 | 59.5 | 60.0 | 0.0 | 0.0 | 0.0 | 1.859 | 04/02/2026 11:23:16 | 04/02/2026 11:25:51 | 0:02:35,0 | F | NINGUNA | INCORRECTA | AGUAS Y ENERGIA PERU |
| Zona A | TV-13 | SIEMENS | 7SJ621 | BF1109124427 | TOMAS VALLE | 10.0 | TV-13 | 344 | 01/01/2026 | Etapa 6 | 59.5 | 60.0 | 0.0 | 0.0 | 0.0 | 2.427 | 04/02/2026 11:23:1 | 04/02/2026 11:37:3 | 0:14:25,0 | F | NINGUNA | INCORRECTA | AGUAS Y ENERGIA PERU |

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| Zona A | MA-05 | SEL | SEL751 | 3192670312 | MARANGA | 10.0 | MA-05 | 1VC1CD00056086 | 01/01/2026 | Etapa 6 | 59.5 | 60.0 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | V-12 | SIEMENS | 7SJ85 | BM1807010878 | VENTANILLA | 10.0 | V-12 | 2002470648-10-004 | 01/01/2026 | Etapa 6 | 59.5 | 60.0 | 0.0 | 0.0 | 0.0 | 1.857 | 04/02/2026 11:23:15 | 04/02/2026 11:26:40 | 0:03:25,0 | F | NINGUNA | INCORRECTA | AGUAS Y ENERGIA PERU |
| Zona A | O-07 | ABB | REF620 | 1VHR91526399 | OQUENDO | 10.0 | O-07 | G2SE9623005 | 01/01/2026 | Etapa 6 | 59.5 | 60.0 | 0.0 | 0.0 | 0.0 | 1.412 | 04/02/2026 11:23:14 | 04/02/2026 11:25:48 | 0:02:34,0 | F | NINGUNA | INCORRECTA | AGUAS Y ENERGIA PERU |
| Zona A | HL-06 | SEL | SEL751 | 3212140409 | HUARAL | 10.0 | HL-06 | 7003281-4010-99 | 01/01/2026 | Etapa 6 | 59.5 | 60.0 | 0.0 | 0.0 | 0.0 | 2.045 | 04/02/2026 11:23:16 | 04/02/2026 11:25:26 | 0:02:10,0 | F | NINGUNA | INCORRECTA | AGUAS Y ENERGIA PERU |
| Zona A | HL-05 | SEL | SEL751 | 3212140367 | HUARAL | 10.0 | HL-05 | 7003281-4005-99 | 01/01/2026 | Etapa 6 | 59.5 | 60.0 | 0.0 | 0.0 | 0.0 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | NZ-04 | SIEMENS | 7SJ85 | BM1807010824 | HUARANGAL | 10.0 | NZ-04 | 2002470648-10-007 | 01/01/2026 | Etapa 6 | 59.5 | 60.0 | 0.0 | 0.0 | 0.0 | 1.788 | 04/02/2026 11:23:15 | 04/02/2026 11:27:00 | 0:03:45,0 | F | NINGUNA | INCORRECTA | AGUAS Y ENERGIA PERU |
| Zona A | W-02 | SIEMENS | 7SJ621 | BF1109148475 | ZAPALLAL | 10.0 | W-02 | G29433015 | 01/01/2026 | Etapa 1 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | PP-02 | ABB | REF630 | 1VHR9107087 3 | PUENTE PIEDRA | 10.0 | PP-02 | 169 | 01/01/2026 | Etapa 1 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | FA-05 | SIEMENS | 7SJ85 | BM1807010851 | FILADELFIA | 10.0 | FA-05 | V-014277-10-004 | 01/01/2026 | Etapa 1 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | M-10 | SEL | SEL351 | 3151400021 | MIRONES | 10.0 | M-10 | 720017192-4028-00 | 01/01/2026 | Etapa 1 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | P-14 | ABB | REF630 | 1VHR9107086 5 | SANTA.ROSA ANTIGUA | 10.0 | P-14 | 0112260010-9 | 01/01/2026 | Etapa 1 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CG-04 | SEL | SEL751 | 3212140405 | CANTOGRANDE | 10.0 | CG-04 | 2001-570506.31-07 | 01/01/2026 | Etapa 1 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | T-24 | SEL | SEL351 | 3151390017 | TACNA | 10.0 | T-24 | 56570 | 01/01/2026 | Etapa 1 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | TV-20 | SEL | SEL351 | 1122350173 | TOMAS VALLE | 10.0 | TV-20 | V 412-06154 | 01/01/2026 | Etapa 1 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CY-07 | SEL | SEL751 | 3233215517 | CHANCAY | 10.0 | CY-07 | E2SE76843 | 01/01/2026 | Etapa 1 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CH-07 | SEL | SEL351 | 3171000774 | CHAVARRIA | 10.0 | CH-07 | 1VC1CC00037254 | 01/01/2026 | Etapa 1 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | K-28 | SEL | SEL351 | 1141950112 | BARSI | 10.0 | K-28 | 1VC1BE00032154 | 01/01/2026 | Etapa 1 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CV-14 | SEL | SEL351 | 1141960062 | CAUDIVILLA | 10.0 | CV-14 | V-007728-20-07 | 01/01/2026 | Etapa 1 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona | CY-02 | SEL | SEL751 | 3211300410 | CHANCAY | 10.0 | CY-02 | 7003281-4014-99 | 01/01/2026 | Etapa 1 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA |

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| A | | | | | | | | | | | | | | | | | | | | | | | PERU |
| Zona A | JG-02 | SEL | SEL751 | 3212020134 | JOSE GRANDA | 10.0 | JG-02 | 2005070248-10-006 | 01/01/2026 | Etapa 1 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | FA-03 | SIEMENS | 7SJ85 | BM2209009109 | FILADELFIA | 10.0 | FA-03 | V-014812-10-002 | 01/01/2026 | Etapa 1 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | FA-04 | SIEMENS | 7SJ85 | BM1807010872 | FILADELFIA | 10.0 | FA-04 | V-014277-10-003 | 01/01/2026 | Etapa 1 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | H-03 | SEL | SEL751 | 3212140391 | HUACHO | 10.0 | H-03 | AA00023819 | 01/01/2026 | Etapa 1 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | M-24 | SEL | SEL351 | 3151400016 | MIRONES | 10.0 | M-24 | 720017192-4014-00 | 01/01/2026 | Etapa 1 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | Z-20 | SIEMENS | 7SJ85 | BM1807009846 | ZARATE | 10.0 | Z-20 | 2002470648-10-003 | 01/01/2026 | Etapa 2 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | W-08 | SEL | SEL351 | 3151400018 | ZAPALLAL | 10.0 | W-08 | V-014277-20-016 | 01/01/2026 | Etapa 2 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | M-26 | SEL | SEL351 | 3151390016 | MIRONES | 10.0 | M-26 | 720017192-4026-00 | 01/01/2026 | Etapa 2 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | P-29 | ABB | REF630 | 1VHR91070863 | SANTA.ROSA ANTIGUA | 10.0 | P-29 | 0112260010-4 | 01/01/2026 | Etapa 2 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | HY-01 | SIEMENS | 7SJ85 | BM1601003606 | HUANDOY | 10.0 | HY-01 | 1VC1BE00029515 | 01/01/2026 | Etapa 2 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | O-02 | ABB | REF620 | 1VHR91526396 | OQUENDO | 10.0 | O-02 | 7 00048-4-6 | 01/01/2026 | Etapa 2 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | W-07 | ABB | REF630 | 1VHR91070881 | ZAPALLAL | 10.0 | W-07 | V 412-06157 | 01/01/2026 | Etapa 2 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | T-08 | SEL | SEL351 | 3151400010 | TACNA | 10.0 | T-08 | 56678 | 01/01/2026 | Etapa 2 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | T-12 | SEL | SEL351 | 1161930125 | TACNA | 10.0 | T-12 | 56674 | 01/01/2026 | Etapa 2 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | K-26 | SEL | SEL351 | 1141950109 | BARSI | 10.0 | K-26 | 1VC1BE00032151 | 01/01/2026 | Etapa 2 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | Z-15 | SEL | SEL351 | 3171000764 | ZARATE | 10.0 | Z-15 | V-014277-20-024 | 01/01/2026 | Etapa 2 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | MS-04 | SIEMENS | 7SJ85 | BM1807010923 | MALVINAS | 10.0 | MS-04 | V-014277-20-005 | 01/01/2026 | Etapa 2 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | MS-08 | SEL | SEL751 | 3241225632 | MALVINAS | 10.0 | MS-08 | V-014277-20-001 | 01/01/2026 | Etapa 2 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | NJ-06 | SIEMENS | 7SJ85 | BM1807010821 | NARANJAL | 10.0 | NJ-06 | V-180663 | 01/01/2026 | Etapa 2 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | NJ-15 | SIEMENS | 7SJ85 | BM1807011232 | NARANJAL | 10.0 | NJ-15 | 148 | 01/01/2026 | Etapa 2 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |

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| Zona A | J-07 | SEL | SEL351 | 3151400003 | JICAMARCA | 10.0 | J-07 | 1VC1BE00052074 | 01/01/2026 | Etapa 2 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | HL-02 | SEL | SEL751 | 3212140393 | HUARAL | 10.0 | HL-02 | 7003281-4001-99 | 01/01/2026 | Etapa 2 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CG-16 | SIEMENS | 7SJ85 | BM1807011238 | CANTOGRANDE | 10.0 | CG-16 | 09-00147-02-15 | 01/01/2026 | Etapa 2 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CH-05 | SEL | SEL351 | 1161930135 | CHAVARRIA | 10.0 | CH-05 | 2001-570506.33-03 | 01/01/2026 | Etapa 2 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | Z-17 | SEL | SEL351 | 3151390022 | ZARATE | 10.0 | Z-17 | 1042217876 | 01/01/2026 | Etapa 2 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CV-15 | SEL | SEL351 | 1141960061 | CAUDIVILLA | 10.0 | CV-15 | V-007728-20-12 | 01/01/2026 | Etapa 2 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | FA-06 | SIEMENS | 7SJ85 | BM1807010842 | FILADELFIA | 10.0 | FA-06 | 2002470648-10-002 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | HY-02 | SIEMENS | 7SJ85 | BM1807010920 | HUANDOY | 10.0 | HY-02 | 1VC1BE00029514 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | HY-04 | SIEMENS | 7SJ85 | BM1807010839 | HUANDOY | 10.0 | HY-04 | 1VC1BE00029513 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | I-11 | SEL | SEL351 | 1122210163 | INFANTAS | 10.0 | I-11 | 175 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | I-14 | SEL | SEL351 | 1122210162 | INFANTAS | 10.0 | I-14 | 343 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | K-15 | SEL | SEL751 | 3233245415 | BARSI | 10.0 | K-15 | 111009 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | IE-04 | EFACEC | TPUS430 | 949955 | IZAGUIRRE | 10.0 | IE-04 | 18VCB00983 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | MA-17 | SEL | SEL351 | 1130110013 | MARANGA | 10.0 | MA-17 | 09-00147-13-07 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | MI-01 | EFACEC | TPUS430 | 946382 | MARIATEGUI | 10.0 | MI-01 | 2000851607-20-006 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | MI-08 | SIEMENS | 7SJ85 | BM1807011205 | MARIATEGUI | 10.0 | MI-08 | 2002470648-10-008 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | MI-09 | SIEMENS | 7SJ85 | BM1807011208 | MARIATEGUI | 10.0 | MI-09 | 2003067110-20-002 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | MI-10 | SIEMENS | 7SJ85 | BM1807011244 | MARIATEGUI | 10.0 | MI-10 | 2003067110-20-003 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | NJ-11 | SIEMENS | 7SJ85 | BM1807010788 | NARANJAL | 10.0 | NJ-11 | V19-0259 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | PA-02 | SEL | SEL751 | 3231995544 | PANDO | 10.0 | PA-02 | 82-29.778-3 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona | PA-07 | SEL | SEL751 | 3232005166 | PANDO | 10.0 | PA-07 | 82-29.778-10 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA |

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| A | | | | | | | | | | | | | | | | | | | | | | | PERU |
| Zona A | PP-15 | SIEMENS | 7SJ85 | BM1809008493 | PUENTE PIEDRA | 10.0 | PP-15 | 2003067110-20-001 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | T-21 | SEL | SEL351 | 1161930138 | TACNA | 10.0 | T-21 | 56571 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | T-19 | SEL | SEL351 | 3151400024 | TACNA | 10.0 | T-19 | 56680 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | Q-26 | SEL | SEL351 | 1141920176 | PERSHING | 10.0 | Q-26 | 1VC1BE00028643 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CV-12 | SIEMENS | 7SJ621 | BF1109148484 | CAUDIVILLA | 10.0 | CV-12 | V10-0690 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | ID-11 | SEL | SEL751 | 3233245414 | INDUSTRIAL | 10.0 | ID-11 | 2001-570506.31-03 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | Q-24 | SEL | SEL351 | 1122210174 | PERSHING | 10.0 | Q-24 | V-007728-20-11 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CV-16 | SEL | SEL351 | 3151400006 | CAUDIVILLA | 10.0 | CV-16 | V-014277-20-015 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CV-03 | SEL | SEL351 | 1122210181 | CAUDIVILLA | 10.0 | CV-03 | 97081556 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | CV-05 | SEL | SEL351 | 1130110007 | CAUDIVILLA | 10.0 | CV-05 | 97081552 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | HL-04 | SEL | SEL751 | 3212140378 | HUARAL | 10.0 | HL-04 | 7003281-4004-99 | 01/01/2026 | Etapa 3 | 0.0 | 0.0 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |

## ELECTROCENTRO

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | 4RL-023 | General Electric | F650BACF2G1HL6 | 81.034.503 | S.E. LA UNION | 22.9 | A4268 | 4IN-022-800 | 30/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-023 | General Electric | F650BACF2G1HL6 | 81.034.503 | S.E. LA UNION | 22.9 | A4269 | 4IN-022-800 | 30/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-02 | General Electri | F650BACF2G1HL6 | 81.034.503 | S.E. LA UNION | 22.9 | A4270 | 4IN-022-800 | 30/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRI |

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| | 3 | c | | | | | | | | | | | | | | | | | | | | | CIDAD DEL PERU S.A. |
| Zona A | 4RL-023 | General Electric | F650BACF2G1HL6 | 81.034.503 | S.E. LA UNION | 22.9 | A4271 | 4IN-022-800 | 30/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-023 | General Electric | F650BACF2G1HL6 | 81.034.503 | S.E. LA UNION | 22.9 | A4272 | 4IN-022-800 | 30/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-011 | ABB | REF630 | 1VHR91102006 | S.E. NINATAMBO | 22.9 | A4750 | 4IN-022-422 | 30/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-022 | GENERAL ELECTRIC | F650BACF2G1HIS6 | 80.919.404 | S.E. PUERTO BERMUDEZ | 33.0 | A4895 | 4IN-033-702 | 30/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-003 | GENERAL ELECTRIC | F60-HO3-HCH-F8F-H6A-MXX-PXX-UXX-WXX | AAHC06001204 | S.E. HUANTA | 22.9 | A4011 | 4RC-022-220 | 30/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-003 | GENERAL ELECTRIC | F60-HO3-HCH-F8F-H6A-MXX-PXX-UXX-WXX | AAHC06001204 | S.E. HUANTA | 22.9 | A4012 | 4RC-022-222 | 30/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-031 | SIEMENS | SIPROTEC - 7SJ85 | BM1410000765 | S.E. AYACUCHO | 22.9 | A4006 | 4IN-022-302 | 30/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-070 | SEL | 7518S1A4DCD7787BG31 | 3550105273 | S.E. AYACUCHO | 22.9 | A4038 | 4IN-022-204 | 30/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona | 4RL- | SIEMENS | SIPROTEC - 7SJ85 | BM1410000672 | S.E. AYACUC | 22.9 | A4008 | 4IN-022- | 30/12/2025 | Etapa | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA |

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| A | 033 | | | | HO | | | 306 | | 2 | | | | | | | | | | | | | ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-046 | SEL | 0451561EXC4X3H25XXXX1 | 1150920051 | S.E. CIUDAD CONSTITUCION | 33.0 | A4892 | 4IN-033-710 | 30/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-002 | GENERAL ELECTRIC | F60-G00-HCH-F8F-H6A- M6B-PXX-UXX-WXX | AAHC08000181 | S.E. HUANCAVELICA (FRIASPATA) | 10.0 | A4103 | IN-1250 | 30/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-007 | GENERAL ELECTRIC | F650BACF2G1HI6 | 80.761.207 | S.E. PICHANAKI | 22.9 | A4843 | 4IN-022-738 | 30/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-005 | GENERAL ELECTRIC | F650BACF2G1HI6 | 80.761.211 | S.E. VILLA RICA | 22.9 | A4880 | 4IN-022-774 | 30/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-006 | GENERAL ELECTRIC | F60-H03-HCH-F8F-H6A- MXX-PXX-UXX-WXX | AAHC06001203 | S.E. ALTO MARCAVALLE | 10.0 | A4762 | 4IN-010-462 | 30/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-006 | GENERAL ELECTRIC | F60-H03-HCH-F8F-H6A- MXX-PXX-UXX-WXX | AAHC06001203 | S.E. ALTO MARCAVALLE | 10.0 | A4763 | 4IN-010-463 | 30/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-026 | ABB | REF630 | 1VHR91083910 | S.E. XAUXA | 13.9 | A4601 | 4IN-013-050 | 30/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-019 | GENERAL ELECTRIC | F60-WA3-AEH-F8L-H6A-M6B-PXX-UXX-WXX | AAHC19000301 | S.E. PASCO | 22.9 | A4907 | 4IN-022-952 | 30/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |

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| Zona A | 4RL-020 | GENERAL ELECTRIC | F650MADF2G1HIS6E | 82.142.901 | S.E. HUANUCO | 22.9 | A4257 | IN-1268 | 30/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-022 | GENERAL ELECTRIC | F650BACF2G1HIS6 | 80.960.802 | S.E. PUERTO BERMUDEZ | 33.0 | A4897 | 4IN-033-704 | 30/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-002 | GENERAL ELECTRIC | F60-G00-HCH-F8F-H6A- M6B-PXX-UXX-WXX | AAHC08000181 | S.E. HUANCAVELICA (FRIASPATA) | 10.0 | A4102 | IN-1248 | 30/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-025 | GENERAL ELECTRIC | F650MACF2G1HIS6E | 82.064.502 | S.E. HUANUCO | 22.9 | A4259 | IN-1275 | 30/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-044 | ABB | REF630 | 1VHR91069452 | S.E. PAMPAS - SAN ANTONIO | 10.0 | A4191 | 4IN-010-610 | 30/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-059 | SIEMENS | SIPROTEC - 7SJ85 | BM1410000724 | S.E. AYACUCHO | 10.0 | A4003 | 4IN-010-306 | 30/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-011 | GENERAL ELECTRIC | F650BACF2G0HI | 80.818.008 | S.E. SAN FRANCISCO | 22.9 | A4030 | 4IN-022-256 | 30/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-056 | ABB | REF630 | 1VHR91083920 | S.E. OXAPAMPA | 22.9 | A4864 | 4IN-022-708 | 30/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-021 | GENERAL ELECTRIC | F650MACF2G1HIS6E | 82.064.504 | S.E. HUANUCO | 22.9 | A4260 | IN-1276 | 30/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU |

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| Zona A | 4RL-015 | SIEMENS | SIPROTEC - 7SJ85 | BM1410000766 | S.E. AYACUCHO | 10.0 | A4004 | 4IN-010-312 | 30/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-061 | NOJA | RC15 | 069-1721110137 | S.E. SATIPO | 22.9 | A4821 | 4RC-022-714 | 30/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-058 | SIEMENS | 7SJ85 | BM2107011195 | S.E. SAN FRANCISCO | 22.9 | A4033 | 4IN-022-274 | 30/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-062 | GENERAL ELECTRIC | F60-WA3-AEH-F8L-H6A-M6B-PXX-UXX-WXX | AAHC19000304 | S.E. CHUPACA | 13.2 | A4401 | 4IN-013-082 | 30/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-041 | ABB | REF630 | 1VHR91102005 | S.E. NINATAMBO | 22.9 | A4704 | 4IN-022-420 | 30/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-054 | GENERAL ELECTRIC | F60-WA3-AEH-F8L-H6A-M6B-PXX-UXX-WXX | AAHC19000306 | S.E. CHUPACA | 13.2 | A4403 | 4IN-013-078 | 30/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-028 | ABB | REF630 | 1VHR91083912 | S.E. XAUXA | 13.9 | A4603 | 4IN-013-054 | 30/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-029 | ABB | REF630 | 1VHR91083915 | S.E. XAUXA | 13.9 | A4604 | 4IN-013-056 | 30/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-030 | ABB | REF630 | 1VHR91083918 | S.E. XAUXA | 13.9 | A4605 | 4IN-013-058 | 30/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD |

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| Zona A | 4RL-016 | GENERAL ELECTRIC | F650BACF2G1HI | 80.644.706 | S.E. HUANCAYO ESTE | 10.0 | A4241 | 4IN-010-053 | 30/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | 1.286 | 04/02/2026 11:23:15 | 04/02/2026 11:31:13 | 0:07:58,0 | F | NINGUNA | INCORRECTA | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 4RL-052 | NOJA | RC15 | 069-1721090295 | S.E. CANGALLO | 22.9 | A4023 | 4RC-022-206 | 30/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | 0.175 | 04/02/2026 11:23:15 | 04/02/2026 11:31:39 | 0:08:24,0 | F | NINGUNA | INCORRECTA | EMPRESA ELECTRICIDAD DEL PERU S.A. |

## ELECTRONORTE

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | RSC 032 | GENERAL ELECTRIC | F650 | 80.617.418 | SECHNOR 60 KV | 10.0 | A2014 | IN1032 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RFR 006 | ENTEC | EVRC2A-NT | PR219020297 | TUMAN | 22.9 | A2038 | RE2006 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RFR 012 | TAVRIDA ELECTRIC | RC5_4 | 82103167 | CARHUAQUERO | 22.9 | A2055 | RE2012 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RSC 027 | SCHNEIDER-MICOM | P139 | 36359115 | SECHNOR 60 KV | 10.0 | A2011 | IN1027 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RSC 029 | SCHNEIDER-MICOM | P139 | 36359116 | SECHNOR 60 KV | 10.0 | A2013 | IN1029 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RFR 005 | ENTEC | EVRC2A-NT | PR219020271 | TUMAN | 22.9 | A2039 | RE2005 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RFR 013 | ENTEC | EVRC2A-NT | PR219020272 | CARHUAQUERO | 22.9 | A2056 | RE2013 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RFR 003 | TAVRIDA ELECTRIC | RC5_4 | 82103370 | POMALCA | 22.9 | A2070 | RE2003 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RSC 076 | SIEMENS | 7SR5111 | GF2309509668 | SECHNOR 60 KV | 10.0 | A2074 | IN1076 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |

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| Zona A | RFR 002 | ENTEC | EVRC 2A-NT | PR21902 0288 | POMALCA | 22 .9 | A2051 | RE2 002 | 01/01/ 2026 | Eta pa 4 | 58.6 | 0.15 | | | | | | | | | | | | EMPRESA ELECTRIC IDAD DEL PERU S.A. |
| Zona A | RFR 020 | SCHNEI DER-NULEC | N38S -ACR | 388107 | SUBESTA CION DE POTENCI A CUTERVO | 22 .9 | A2617 | RE2 020 | 01/01/ 2026 | Eta pa 4 | 58.6 | 0.15 | | | | | | | | | | | | EMPRESA ELECTRIC IDAD DEL PERU S.A. |
| Zona A | RFR 023 | SCHNEI DER-NULEC | N38S -ACR | 388110 | SUBESTA CION DE POTENCI A CUTERVO | 22 .9 | A2613 | RE2 023 | 01/01/ 2026 | Eta pa 4 | 58.6 | 0.15 | | | | | | | | | | | | EMPRESA ELECTRIC IDAD DEL PERU S.A. |
| Zona A | RSC 094 | SIEMEN S | 7SJ6 426 | BF130250 4419 | SECHO 60 KV | 10 .0 | A2008 | IN10 94 | 01/01/ 2026 | Eta pa 4 | 58.6 | 0.15 | | | | | | | | | | | | EMPRESA ELECTRIC IDAD DEL PERU S.A. |
| Zona A | RSC 014 | SIEMEN S | 7SJ6 426 | BF060405 5917 | SECHO 60 KV | 10 .0 | A2022 | IN10 14 | 01/01/ 2026 | Eta pa 5 | 58.5 | 0.15 | | | | | | | | | | | | EMPRESA ELECTRIC IDAD DEL PERU S.A. |
| Zona A | RSC 025 | GENER AL ELECTR IC | F650 | 80.268.60 5 | SECHNOR 60 KV | 10 .0 | A2009 | IN10 25 | 01/01/ 2026 | Eta pa 5 | 58.5 | 0.15 | | | | | | | | | | | | EMPRESA ELECTRIC IDAD DEL PERU S.A. |
| Zona A | RFR 083 | TAVRID A ELECTR IC | RC5_ 4 | 82103176 | OLMOS | 10 .0 | A2053 | IN10 83 | 01/01/ 2026 | Eta pa 5 | 58.5 | 0.15 | | | | | | | | | | | | EMPRESA ELECTRIC IDAD DEL PERU S.A. |
| Zona A | RFR 009 | NOJA POWER | RC-10ES | 02001121 00513 | CAYALTI | 22 .9 | A2052 | RE2 009 | 01/01/ 2026 | Eta pa 6 | 59.5 | 60.0 | | | | 2.94 | 04/02/2 026 11:22:0 0 | 04/02/2 026 11:43:0 0 | 0:21:0 0,0 | F | NINGU NA | INCORR ECTA | EMPRESA ELECTRIC IDAD DEL PERU S.A. |

## ESMERALDA CORP

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | R_ERA CMF | SCHNE IDER ELECT RIC | Easergy Micom P143 | P143911A2 M0448J | Sub Estacion Zona A | 0. 44 | Compresores | CR2 4 | 30/12/ 2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | 0.0 | 26/02/2 026 11:21:0 0 | 26/02/2 026 12:21:0 0 | 1:00:0 0,0 | DF | NINGU NA | INCORR ECTA | ENGIE ENERGIA PERU |
| Zona A | R_ERA CMF | SCHNE IDER ELECT RIC | Easergy Micom P143 | P143911A2 M0448J | Sub Estacion Zona A | 0. 44 | Compresores | CT0 3 | 30/12/ 2025 | Etapa 2 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | 0.0 | 26/02/2 026 11:21:0 0 | 26/02/2 026 12:21:0 0 | 1:00:0 0,0 | DF | NINGU NA | INCORR ECTA | ENGIE ENERGIA PERU |
| Zona A | R_ERA CMF | SCHNE IDER ELECT RIC | Easergy Micom P143 | P143911A2 M0448J | Sub Estacion Zona A | 0. 44 | Compresores | CT3 4 | 30/12/ 2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | 0.11 | 26/02/2 026 11:21:0 0 | 26/02/2 026 12:21:0 0 | 1:00:0 0,0 | DF | NINGU NA | INCORR ECTA | ENGIE ENERGIA PERU |
| Zona A | R_ERA CMF | SCHNE IDER ELECT RIC | Easergy Micom P143 | P143911A2 M0448J | Sub Estacion Zona | 0. 44 | Compresores | CT3 8 | 30/12/ 2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | 0.13 | 26/02/2 026 11:21:0 0 | 26/02/2 026 12:21:0 0 | 1:00:0 0,0 | DF | NINGU NA | INCORR ECTA | ENGIE ENERGIA PERU |

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| | | | | | A | | | | | | | | | | | | | | | | | | |
| Zona A | R_ERA CMF | SCHNEIDER ELECTRIC | Easergy Micom P143 | P143911A2M0448J | Sub Estacion Zona A | 0.44 | Compresores | CT06 | 30/12/2025 | Etapa 3 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | 0.0 | 26/02/2026 11:21:00 | 26/02/2026 11:21:00 | 0:00:00,0 | F | NINGUNA | INCORRECTA | ENGIE ENERGIA PERU |
| Zona A | R_ERA CMF | SCHNEIDER ELECTRIC | Easergy Micom P143 | P143911A2M0448J | Sub Estacion Zona A | 0.44 | Compresores | CT39 | 30/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | 0.0 | 26/02/2026 11:21:00 | 26/02/2026 11:21:00 | 0:00:00,0 | F | NINGUNA | INCORRECTA | ENGIE ENERGIA PERU |
| Zona A | R_ERA CMF | SCHNEIDER ELECTRIC | Easergy Micom P143 | P143911A2M0448J | Sub Estacion Zona A | 0.44 | Compresores | CT07 | 30/12/2025 | Etapa 4 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | 0.0 | 26/02/2026 11:21:00 | 26/02/2026 11:21:00 | 0:00:00,0 | F | NINGUNA | INCORRECTA | ENGIE ENERGIA PERU |
| Zona A | R_ERA CMF | SCHNEIDER ELECTRIC | Easergy Micom P143 | P143911A2M0448J | Sub Estacion Zona A | 0.44 | Compresores | CT05 | 30/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | 0.0 | 26/02/2026 11:21:00 | 26/02/2026 11:21:00 | 0:00:00,0 | F | NINGUNA | INCORRECTA | ENGIE ENERGIA PERU |
| Zona A | R_ERA CMF | SCHNEIDER ELECTRIC | Easergy Micom P143 | P143911A2M0448J | Sub Estacion Zona A | 0.44 | Compresores | CT08 | 30/12/2025 | Etapa 5 | 58.6 | 0.15 | | | | 0.0 | 26/02/2026 11:21:00 | 26/02/2026 11:21:00 | 0:00:00,0 | F | F - ETAPA 5 | INCORRECTA | ENGIE ENERGIA PERU |
| Zona A | R_ERA CMF | SCHNEIDER ELECTRIC | Easergy Micom P143 | P143911A2M0448J | Sub Estacion Zona A | 0.44 | Compresores | CR23 | 30/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | 0.0 | 26/02/2026 11:21:00 | 26/02/2026 11:21:00 | 0:00:00,0 | F | F - ETAPA 5 | INCORRECTA | ENGIE ENERGIA PERU |
| Zona A | R_ERA CMF | SCHNEIDER ELECTRIC | Easergy Micom P143 | P143911A2M0448J | Sub Estacion Zona A | 0.44 | Compresores | CT04 | 30/12/2025 | Etapa 6 | 58.5 | 0.15 | | | | 0.0 | 26/02/2026 11:21:00 | 26/02/2026 11:21:00 | 0:00:00,0 | DF | NINGUNA | INCORRECTA | ENGIE ENERGIA PERU |

## ELECTRO ORIENTE

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | RELE-NC-S04 | ABB | REF630 | 1VHR91033680 | SET NUEVA CAJAMARCA | 22.9 | 3294 | IN-NC-S04 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RELE-JU-S01 | ABB | REF543 | ER348508 | SE JUANJUI | 10.0 | 4641 | IN-1103 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RELE-NJA201 | SIEMENS | 7SJ82 | BM2407005710 | SUBESTACION DE POTENCIA NUEVA JAEN | 22.9 | A2407 | IN2066 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RELE-MO- | SEL | SEL351 | 1110280183 | SE MOYOBAMBA | 10.0 | 3212 | IN-MO-S02 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL |

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| | S02 | | | | | | | | | | | | | | | | | | | | | | PERU S.A. |
| Zona A | RELE-JAE101 | NOJA POWER | REL-02 | 0311722010472 | SUBESTACION DE POTENCIA JAEN | 10.0 | A2405 | IN-JAE101 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RELE-RI-S04 | ABB | REF615 | 1VHR91857765 | RIOJA | 22.9 | 3454 | IN-RI-S04 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RELE-TA-S02 | SEL | SEL751 | 3162850166 | SE TARAPOTO | 22.9 | 2012 | IN-TA-S02 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RELE-JU-S02 | ABB | REF543 | ER348513 | SE JUANJUI | 10.0 | 4642 | IN-1104 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RELE-MO-S01 | SEL | SEL351 | 1110280180 | SE MOYOBAMBA | 10.0 | 3211 | IN-MO-S01 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RELE-TA-S06 | SEL | SEL751 | 3162850170 | SE TARAPOTO | 22.9 | 2016 | IN-TA-S06 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RELE-BE-S02 | ENTEC | EVRC2A-NT | 14030206 | BELLAVISTA | 22.9 | 4644 | IN-BE-S02 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RELE-YU-S01 | SEL | SEL751 | 3190580239 | SE YURIMAGUAS | 10.0 | 5701 | IN-YU-S01 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RELE-BE-S05 | ABB | PCD 2000 | 294504 | BELLAVISTA | 22.9 | 4615 | IN-BE-S05 | 01/01/2026 | Etapa 6 | 59.5 | 60.0 | | | | 1.6 | 04/02/2026 11:22:00 | 04/02/2026 11:35:00 | 0:13:00,0 | F | NINGUNA | INCORRECTA | EMPRESA ELECTRICIDAD DEL PERU S.A. |

## ELECTRO PUNO

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | IN-1022 | SEL | 351-A | 1151740168 | ILAVE | 22.9 | 1002 | IN-1022 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | SAN GABAN |
| Zona A | IN-1023 | SEL | 351-A | 1151740169 | ILAVE | 22.9 | 1003 | IN-1023 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | SAN GABAN |
| Zona A | IN-2023 | SEL | 351-A | 1151740172 | POMATA | 22.9 | 2003 | IN-2023 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | SAN GABAN |
| Zona A | IN-6005 | SEL | 751-R300 | 3210390251 | AYAVIRI | 22.9 | 6005 | IN-6005 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | SAN GABAN |
| Zona A | IN-2024 | SEL | 351-A | 1151740173 | POMATA | 22.9 | 2004 | IN-2024 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | SAN GABAN |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | IN-2025 | SEL | 751-R400 | 3232785358 | POMATA | 22.9 | 2005 | IN-2025 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | SAN GABAN |
| Zona A | IN-3025 | GE INDUSTRIAL SYSTEM | F60-G03-HKH-F8L-H6H-M6B-P6E-UXX-WXX | - | ANANEA | 22.9 | 3004 | IN-3025 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | SAN GABAN |
| Zona A | IN-3022 | GE INDUSTRIAL SYSTEM | F60-G03-HKH-F8L-H6H-M6B-P6E-UXX-WXX | - | ANANEA | 22.9 | 3003 | IN-3022 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | SAN GABAN |
| Zona A | IN-2022 | SEL | 351-A | 1151740171 | POMATA | 22.9 | 2002 | IN-2022 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | SAN GABAN |
| Zona A | IN-8004 | SEL | 751-R300 | 3210390254 | AZANGARO | 22.9 | 8004 | IN-8004 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | SAN GABAN |
| Zona A | IN-9021 | NOJA POWER | REL-01 | - | ANTAUTA | 22.9 | 9001 | IN-9021 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | SAN GABAN |
| Zona A | IN-9022 | NOJA POWER | REL-01 | - | ANTAUTA | 22.9 | 9002 | IN-9022 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | SAN GABAN |
| Zona A | IN-3023 | GE INDUSTRIAL SYSTEM | F60-G03-HKH-F8L-H6H-M6B-P6E-UXX-WXX | - | ANANEA | 22.9 | 3002 | IN-3023 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | SAN GABAN |
| Zona A | IN-4023 | GE INDUSTRIAL SYSTEM | F60-G03-HKH-F8L-H6H-M6B-P6E-UXX-WXX | - | HUANCANE | 22.9 | 4003 | IN-4023 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | SAN GABAN |
| Zona A | IN-4021 | GE INDUSTRIAL SYSTEM | F60-G03-HKH-F8L-H6H-M6B-P6E-UXX-WXX | - | HUANCANE | 22.9 | 4001 | IN-4021 | 01/01/2026 | Etapa 6 | 59.5 | 60.0 | | | | 0.29 | 04/02/2026 11:23:42 | 04/02/2026 11:26:35 | 0:02:53,0 | F | NINGUNA | INCORRECTA | SAN GABAN |
| Zona A | IN-402 | GE INDUST | F60-G03- | - | HUANCANE | 22.9 | 4002 | IN-4022 | 01/01/2026 | Etapa 6 | 59.5 | 60.0 | | | | | | | | | | | SAN GABAN |

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| | 2 | RIAL SYSTEM | HKH-F8L-H6H-M6B-P6E-UXX-WXX | | | | | | | | | | | | | | | | | | | | | |
| Zona A | IN-1024 | SEL | 751-R400 | 3232785357 | ILAVE | 22.9 | 1004 | IN-1024 | 01/01/2026 | Etapa 6 | 59.5 | 60.0 | | | | | | | | | | | | SAN GABAN |

## ELECTRO SUR ESTE

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | RF-SM-060 | SEL | SEL487E | 1123130585 | SANTA MARIA | 22.9 | SM03 | IN-205 | 31/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.35 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-SI-03 | ABB | REX640 | 1VHR81029005 | SICUANI | 10.5 | SI03 | IN-153 | 31/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-UR-002 | SEL | SEL351A | 1132680249 | URUBAMBA | 10.0 | UR01 | IN-139 | 31/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.35 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-CP-060 | SEL | SEL487E | 1123130582 | CHACAPUENTE | 22.9 | CP01 | IN-219 | 31/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.35 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-MZ-138 | SEL | SEL487E | 2008256329 | MAZUKO | 22.9 | MZ01 | IN-237 | 31/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-AN-060 | SEL | SEL487E | 1182360346 | ANDAHUAYLAS | 22.9 | AN05 | IN-215 | 31/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.35 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-SM-060 | SEL | SEL487E | 1123130585 | SANTA MARIA | 22.9 | SM02 | IN-204 | 31/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.35 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-CA | SEL | SEL351A | 1132670358 | CACHIMAYO | 10.5 | CA02 | IN-1867 | 31/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.35 | | | | | | | | EMPRESA ELECTRICIDAD DEL |

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| | -017 | | | | | | | | | | | | | | | | | | | | | | PERU S.A. |
| Zona A | RF-AN-060 | SEL | SEL487E | 1182360346 | ANDAHUAYLAS | 22.9 | AN06 | IN-216 | 31/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.35 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-CP-060 | SEL | SEL487E | 1123130582 | CHACAPUENTE | 22.9 | CP02 | IN-220 | 31/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.35 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-MZ-138 | SEL | SEL487E | 2008256329 | MAZUKO | 22.9 | MZ02 | IN-238 | 31/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-TI-001 | SEL | SEL487E | 2010253463 | TINTAYA | 22.9 | TI01 | IN-250 | 31/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-HU-022 | SEL | SEL487E | 1182360303 | HUARO | 22.9 | HU04 | IN-201 | 31/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.35 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-UR-002 | SEL | SEL351A | 1132680249 | URUBAMBA | 22.9 | UR04 | IN-248 | 31/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.35 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-UR-002 | SEL | SEL351A | 1132680249 | URUBAMBA | 10.0 | UR02 | IN-140 | 31/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.35 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-TA-002 | SEL | SEL751A | 3182570385 | TAMBURCO | 13.2 | TA02 | IN-121 | 31/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-LL-001 | NOJA POWER | RC-10ES | 311715030333 | LLUSCO | 22.9 | LL01 | IN-260 | 31/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-CH-003 | NOJA POWER | RC-10ES | 311818060442 | CHAHUARES | 22.9 | CH03 | IN-229 | 31/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-LL- | NOJA POW | RC-10ES | 311715040150 | LLUSCO | 22.9 | LL03 | IN-262 | 31/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL |

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| | 003 | ER | | | | | | | | | | | | | | | | | | | | | PERU S.A. |
| Zona A | RF-CH-002 | NOJA POWER | RC-10ES | 311718070782 | CHAHUARES | 22.9 | CH02 | IN-228 | 31/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-CA-017 | SEL | SEL351A | 1132670358 | CACHIMAYO | 22.9 | CA01 | IN-1861 | 31/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-LL-002 | NOJA POWER | RC-10ES | 311715020244 | LLUSCO | 22.9 | LL02 | IN-261 | 31/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-PI-004 | NOJA POWER | RC-10ES | 311715030841 | PISAC | 22.9 | PI04 | IN-232 | 31/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-PM-002 | SEL | SEL351A | 1160640145 | MALDONADO | 10.0 | PM02 | IN-136 | 31/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-QU-013 | SEL | SEL351A | 1132670356 | QUENCORO 10.5 | 10.5 | QU01 | IN-1554 | 31/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-QU-013 | SEL | SEL351A | 1132670356 | QUENCORO 10.5 | 10.5 | QU05 | IN-1548 | 31/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-PM-008 | NOJA POWER | RC-10ES | 120115091183 | MALDONADO | 22.9 | PM08 | IN-243 | 31/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-MZ-003 | NOJA POWER | RC-10ES | 0311720050319 | MAZUKO | 22.9 | MZ03 | IN-239 | 31/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-UP-001 | SEL | SEL751 | 3182570375 | URPIPATA | 10.0 | UP01 | IN-116 | 31/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | 0.871 | 04/02/2026 11:23:16 | 04/02/2026 11:28:18 | 0:05:02,0 | F | NINGUNA | INCORRECTA | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | RF-CA | SEL | SEL351A | 1132670358 | CACHIMAYO | 10.5 | CA03 | IN-1868 | 31/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | 1.221 | 04/02/2026 11:23:16 | 04/02/2026 11:27:57 | 0:04:41,0 | F | NINGUNA | INCORRECTA | EMPRESA ELECTRICIDAD DEL |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -017 | | | | | | | | | | | | | | | | | | | | | | PERU S.A. |

## ELECTRO UCAYALI

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | R-D6 | ABB | REF630 | 1VHR91260258 | PARQUE INDUSTRIAL | 22.9 | D6 | IN-D6 | 12/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | R-C9 | ABB | REF630 | 1VHR91335020 | SEP PUCALLPA | 10.0 | C9 | IN-C9 | 12/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | R-C3 | ABB | REF630 | 1VHR91335017 | SEP PUCALLPA | 10.0 | C3 | IN-C3 | 12/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | R-C7 | ABB | REF630 | 1VHR91335015 | SEP PUCALLPA | 10.0 | C7 | IN-C7 | 12/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | R-D7 | ABB | REF630 | 1VHR91501263 | PARQUE INDUSTRIAL | 22.9 | D7 | IN-D7 | 12/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | R-D2 | ABB | REF630 | 1VHR91260261 | PARQUE INDUSTRIAL | 10.0 | D2 | IN-D2 | 12/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | R-N5 | ABB | REF630 | 1VHR91307484 | SEP YARINACOCHA | 10.0 | N5 | IN-N5 | 12/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | 1.4 | 04/02/2026 11:23:15 | 04/02/2026 11:26:35 | 0:03:20,0 | F | NINGUNA | INCORRECTA | EMPRESA ELECTRICIDAD DEL PERU S.A. |

## COMPAÑÍA FOOD RETAIL S.A.C.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 180944 | PV ALFONSO UGARTE | 0.38 | SUB GENERAL 1 Y 2 | TR-TR 1 Y 2 | 10/09/2018 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | EB204530039 | PV MEXICO | 0.38 | SUB GENERAL | TG-N | 29/12/2020 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | EB204530037 | PV VENTANILLA | 0.38 | SUB GENERAL 1 Y 2 | TR-TR 1 Y 2 | 29/12/2020 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 180938 | PV ATE | 0.38 | SUB GENERAL 1 Y 2 | TR-TR 1 Y 2 | 10/09/2018 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 180941 | PV LA MOLINA | 0.38 | SUB GENERAL 1 Y 2 | TR-TR 1 Y 2 | 10/09/2018 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | EB204530038 | PV IZAGUIRRE | 0.38 | SUB GENERAL 1 Y 2 | TR-TR 1 Y 2 | 29/12/2020 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | EB204530034 | PV HIGUERETA | 0.38 | SUB GENERAL 1 Y 2 | TR-TR 1 Y 2 | 29/12/2020 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 180933 | PV ACHO | 0.38 | SUB GENERAL 1 Y 2 | TR1 Y 2 | 10/09/2018 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 180937 | PV CERES | 0.38 | SUB GENERAL 1 Y 2 | TG-TR1 Y 2 | 10/09/2018 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 180940 | PV PRIMAVERA | 0.38 | SUB GENERAL 1 Y 2 | TG-1 Y 2 | 10/09/2018 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 180936 | PV CUZCO MALL | 0.38 | SUB GENERAL | TG-N1 | 10/09/2018 | Etapa 6 | 59.5 | 60.0 | | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |

## A W FABER CASTELL PERUANA S A

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | P14331BH6M0430J | SCHNEIDER ELECTRIC | MICOMP143 | 687392F | SEN°1 | 0.22 | SE1TG-2-IG | INTERRUPTOR GENERAL | 05/12/2020 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | P14331BH6M0430J | SCHNEIDER ELECTRIC | MICOMP143 | 687394F | SEN°3 | 0.22 | SE3TG-1-IG | INTERRUPTOR GENERAL | 05/12/2020 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |

## F Y D INVERSIONES S.A.C.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | PCS-9691 | NR ELECTRIC | PCS-9691 | BD192721 | TDF02-01 | 0.44 | Chocomil 500 | Q-5 | 05/12/2020 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | PCS-9691 | NR ELECTRIC | PCS-9691 | BD 192721 | TDF02-01 | 0.44 | Chocomil 200-2 | Q-1 | 05/12/2020 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | PCS-9691 | NR ELECTRIC | PCS-9691 | BD 192721 | TDF02-01 | 0.44 | Chocomil 200-3 | Q-6 | 05/12/2020 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | PCS-9691 | NR ELECTRIC | PCS-9691 | BD 192721 | TDF02-01 | 0.44 | Chocomil 200-1 | Q-2 | 05/12/2020 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |

## AGROMAR INDUSTRIAL S.A.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | 16021 | FANOX | SIUC000C0AOCAB | 24151056 | Subestación principal | 0.46 | Tablero general de 460 V | ITM – Comp. Tunel 1 | 05/12/2024 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | 0.0 | 04/02/2026 11:22:00 | 04/02/2026 11:28:00 | 0:06:00,0 | F | NINGUNA | INCORRECTA | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | 16021 | FANOX | SIUC000C0AOCAB | 24151056 | Subestación principal | 0.23 | Tablero general de 230 V | Alimentacion T. Distribución | 05/12/2024 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | 0.0 | 04/02/2026 11:22:00 | 04/02/2026 11:28:00 | 0:06:00,0 | F | NINGUNA | INCORRECTA | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | 16021 | FANOX | SIUC000C0AOCAB | 24151056 | Subestación principal | 0.46 | Tablero general de 460 V | Chiller Chino | 05/12/2024 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | 0.0 | 04/02/2026 11:22:00 | 04/02/2026 11:28:00 | 0:06:00,0 | F | NINGUNA | INCORRECTA | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | 16021 | FANOX | SIUC000C0AOCAB | 24151056 | Subestación principal | 0.23 | Tablero general de 230 V | Linea Extraccion 01 - concentrado | 05/12/2024 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | 0.0 | 04/02/2026 11:22:00 | 04/02/2026 11:28:00 | 0:06:00,0 | F | NINGUNA | INCORRECTA | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | 16021 | FANOX | SIUC000C0AOCAB | 24151056 | Subestación principal | 0.46 | Tablero general de 460 V | Camara de congelado N°6 | 05/12/2024 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | 0.0 | 04/02/2026 11:22:00 | 04/02/2026 11:28:00 | 0:06:00,0 | F | NINGUNA | INCORRECTA | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | 16021 | FANOX | SIUC000C0AOCAB | 24151056 | Subestación principal | 0.46 | Tablero general de 460 V | ITM - Cámara. Frigoríficas | 05/12/2024 | Etapa 4 | 58.6 | 0.15 | | | | 0.0 | 04/02/2026 11:22:00 | 04/02/2026 11:28:00 | 0:06:00,0 | F | NINGUNA | INCORRECTA | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | 16021 | FANOX | SIUC000C0AOCAB | 24151056 | Subestación | 0.46 | Tablero | ITM - Caldera | 05/12/2024 | Etapa 4 | 58.6 | 0.15 | | | | 0.0 | 04/02/2026 | 04/02/2026 | 0:06:00,0 | F | NINGUNA | INCORRECTA | CONSORCIO |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | principal | | general de 460 V | Monser | | | | | | | | | 11:22:00 | 11:28:00 | | | | | ELECTRICO DE VILLACURI S.A.C. |
| Zona A | 16021 | FANOX | SIUC000C0AOCAB | 24151056 | Subestación principal | 0.46 | Tablero general de 460 V | ITM - C. Maduración y Conser. | 05/12/2024 | Etapa 5 | 58.5 | 0.15 | | | | 0.0 | 04/02/2026 11:22:00 | 04/02/2026 11:28:00 | 0:06:00,0 | F | F - ETAPA 5 | CORRECTA | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |

## HIDRANDINA

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | 84.040.340 | GE | F650 | 84.040.340 | S.E. HUARMEY | 22.9 | A3083 | IN-2003 | 22/06/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | AAHC06000044 | GE | URF60 | AAHC06000044 | S.E. MOTIL | 33.0 | L313 | IN-3032 | 16/12/2016 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | AAHC06000039 | GE | URF60 | AAHC06000039 | S.E. LA PAMPA | 13.2 | N300061 | IN-1074 | 11/12/2016 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | 84.042.927 | GE | F650 | 84.042.927 | S.E. HUARMEY | 22.9 | A3082 | IN-2004 | 22/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | 84.040.232 | GE | F650 | 84.040.232 | S.E. TRUJILLO SUR | 10.0 | A3154 | IN-1214 | 29/12/2022 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | 84.042.929 | GE | F650 | 84.042.929 | S.E. CASAGRANDE-01 | 10.0 | A3030 | IN-1385 | 18/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | 3180360086 | SEL | 751 | 3180360086 | S.E. CARHUAZ | 13.8 | A3965 | IN-1351 | 26/03/2023 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | 84.040.308 | GE | F650 | 84.040.308 | S.E. CHIMBOTE NORTE | 13.8 | A3059 | IN-1217 | 07/06/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | 81.948.308 | GE | F650 | 81.948.308 | SE CHEPEN | 10.0 | A3558 | IN-1272 | 12/12/2016 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | 84.042.941 | GE | F650 | 84.042.941 | S.E. CAJAMARCA | 10.0 | A3445 | IN-1141 | 27/12/2023 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | AAHC05001016 | GE | URF60 | AAHC05001016 | S.E. CAJABAMBA | 60.0 | L398 | IN-6036 | 18/12/2016 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | 84.040.237 | GE | F650 | 84.040.237 | S.E. VIRU | 10.0 | A3085 | IN-1150 | 23/12/2021 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | AAHC05001016 | GE | URF60 | AAHC05001016 | S.E. CAJABAMBA | 22.9 | A3442 | IN-2018 | 27/12/2019 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | 3180360092 | SEL | 751 | 3180360092 | S.E. CARHUAZ | 13.8 | A3966 | IN-1352 | 27/12/2024 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | AGUAS Y ENERGIA PERU |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | 3203610010 | SEL | 751 | 3203610010 | S.E. TRUJILLO SUR | 10.0 | A3184 | IN-1365 | 22/12/2023 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | AAHC05001016 | GE | UR F60 | AAHC05001016 | S.E. CAJABAMBA | 22.9 | A3135 | IN-2017 | 18/12/2016 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | 3180360087 | SEL | 751 | 3180360087 | S.E. CARAZ | 13.8 | A3968 | IN-1354 | 02/04/2023 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | 84.042.942 | GE | F650 | 84.042.942 | S.E. CHIMBOTE NORTE | 13.8 | A3061 | IN-1221 | 27/12/2024 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | 81.603.801 | GE | F650 | 81.603.801 | S.E. CAJAMARCA | 10.0 | A3456 | IN-1265 | 29/12/2024 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | 84.040.316 | GE | F650 | 84.040.316 | S.E. CHIMBOTE NORTE | 13.8 | A3058 | IN-1218 | 29/12/2022 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | 84.040.321 | GE | F650 | 84.040.321 | S.E. VIRU | 22.9 | A3249 | IN-2050 | 22/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | 81.603.802 | GE | F650 | 81.603.802 | S.E. CAJAMARCA | 10.0 | A3457 | IN-1282 | 29/12/2022 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | 84.040.350 | GE | F650 | 84.040.350 | S.E. PORVENIR | 10.0 | A3185 | IN-1247 | 17/12/2024 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | 84.040.312 | GE | F650 | 84.040.312 | S.E. CHIMBOTE SUR | 13.8 | A3070 | IN-1225 | 29/12/2022 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | 84.040.217 | GE | F650 | 84.040.217 | S.E. VIRU | 22.9 | A3150 | IN-2052 | 30/12/2023 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | 84.042.924 | GE | F650 | 84.042.924 | S.E. VIRU | 10.0 | A3084 | IN-1151 | 29/12/2022 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | | AGUAS Y ENERGIA PERU |
| Zona A | 84.040.201 | GE | F650 | 84.040.201 | S.E. PORVENIR | 10.0 | A3020 | IN-1100 | 17/12/2024 | Etapa 6 | 59.5 | 60.0 | | | | 4.73 | 04/02/2026 11:23:17 | 04/02/2026 11:25:33 | 0:02:16,0 | F | NINGUNA | INCORRECTA | | AGUAS Y ENERGIA PERU |

## PAN AMERICAN SILVER HUARON S.A.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | RL541-0 | ABB | REF541 | ER225418 | San José | 5.5 | Campamento San José | SJII-01 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CELEPSA |
| Zona A | RL521-1 | ABB | REX521 | ER276358 | San José | 5.5 | Campamento Santa Bárbara | SJII-02 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CELEPSA |
| Zona A | RL541-3 | ABB | REF541 | ER225420 | Planta Concentradora | 0.46 | Chancado Sec.7 y Molino 8x8 | PL-01 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CELEPSA |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | RL630-1 | ABB | REF630 | 1VHR91113519 | Planta Concentradora | 5.5 | Molino DOMINION 12'x16' | PL-02 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | | CELEPSA |
| Zona A | RL541-2 | ABB | REF541 | ER330527 | Francois II | 5.5 | Compresores - Talleres | FII-01 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | CELEPSA |
| Zona A | RL541-4 | ABB | REF541 | ER330528 | Francois II | 5.5 | Pique D y Nivel 500 | FII-02 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | | CELEPSA |
| Zona A | RL630-2 | ABB | REF630 | 1VHR91512618 | Planta Concentradora | 5.5 | Molino MARCY 6¿'x14' | PL-03 | 01/01/2026 | Etapa 6 | 59.5 | 60.0 | | | | 0.3 | 05/02/2026 10:35:00 | 05/02/2026 11:24:00 | 0:49:00,0 | F | NINGUNA | INCORRECTA | | CELEPSA |

## HUDBAY PERU S.A.C.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | 7SJ6411-5EB91-3FG0/EE | SIEMENS | 7SJ6411 | BF1307508271 | S.E. CONSTANCIA | 22.9 | H-08 | +H08 | 30/12/2024 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | 7SJ6411-5EB91-3FG0/EE | SIEMENS | 7SJ6411 | BF1307508284 | S.E. CONSTANCIA | 22.9 | H-30 | +H30 | 30/12/2024 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | 7RW80105EB901DC0/CC | SIEMENS | 7RW8010 | BF1909503684 | S.E. CHANCADORA | 4.16 | K-02 | +K02 | 30/12/2024 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | 7RW80105EB901DC0/CC | SIEMENS | 7RW8010 | BF1909503686 | S.E. REMOLIENDA | 4.16 | K-02 | +K02 | 30/12/2024 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | 7SJ6411-5EB91-3FG0/EE | SIEMENS | 7SJ6411 | BF1510505176 | S.E. CONSTANCIA | 22.9 | H-31 | +H31 | 30/12/2024 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | 7RW80105EB901DC0/CC | SIEMENS | 7RW8010 | BF1805502489 | S.E. RELAVES | 4.16 | K-02 | +K02 | 30/12/2024 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | 7RW80105EB90 | SIEMENS | 7RW8010 | BF2211503568 | S.E. MOLIENDA 01 | 13.8 | K-02 | +K02 | 30/12/2024 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1DC0/CC | | | | | | | | | | | | | | | | | | | | | | |
| Zona A | 7RW80105EB90 1DC0/CC | SIEMENS | 7RW8010 | BF2211503567 | S.E. MOLIENDA 01 | 13.8 | K-06 | +K06 | 30/12/2024 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | 7RW80105EB90 1DC0/CC | SIEMENS | 7RW8010 | BF2101502342 | S.E. RELAVES | 4.16 | K-08 | +K08 | 30/12/2024 | Etapa 6 | 59.5 | 60.0 | | | | 1.17 | 04/02/2026 11:23:00 | 04/02/2026 11:36:01 | 0:13:01,0 | F | NINGUNA | INCORRECTA | ENGIE ENERGIA PERU |

## ADMINISTRADORA JOCKEY PLAZA SHOPPING CENTER S.A.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | SE.18 | ALSTOM | P94VB16A7C0610A | 34755497 | SUB ESTACION 18 | 22.9 | MT-9.2 | BASE 03/18 | 16/05/2019 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | SE.12 | ALSTOM | P94VB16A7C0610A | 34755497 | SUB ESTACION 12 | 22.9 | MT-15.1 | BASE 03/12 | 16/05/2019 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | SE.08 | GENERAL ELECTRIC | P94VB15D3B0030E | 36639155 | SUB ESTACION 08 | 22.9 | MT-1.5 | BASE 01/08 | 12/04/2024 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | SE 07 | GENERAL ELECTRIC | P94VB15D3B0030E | 36639155 | SUB ESTACION 07 | 22.9 | MT-1.4 | BASE 01/07 | 12/04/2024 | Etapa 6 | 59.5 | 60.0 | | | | 0.0364 | 04/02/2026 11:23:00 | 04/02/2026 11:43:00 | 0:20:00,0 | F | NINGUNA | INCORRECTA | ENGIE ENERGIA PERU |

## INVERSIONES KANDOO S.A.C.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | P3U306AAA1BCAA | SCHNEIDER ELECTRIC | P3U30 | SM2507512600124 | ARAUCO PISCO | 0.38 | TGN1 | INTERRUPTOR GENERAL | 12/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | P3U306AAA1BCAA | SCHNEIDER ELECTRIC | P3U30 | SM2507512600124 | ARAUCO PISCO | 0.38 | TGN2 | INTERRUPTOR GENERAL | 12/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |

## PARQUE LAMBRAMANI SAC

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | UBFNAAAAABAZANNBXD | ABB | REF 630 | 1VHR91402341 | OULET AREQUIPA | 0.38 | TGA-AA | INTERRUPTOR GENERAL | 15/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | P3U306AAA1BCAA | SCHNEIDER ELECTRIC | P3U30 | SM2448612600908 | OULET LURIN | 0.23 | T-G | INTERRUPTOR GENERAL | 10/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | P3U306AAA1BCAA | SCHNEIDER ELECTRIC | P3U30 | SM2527412600881 | PLZ JESUS MARIA | 0.23 | TG-PRINCIPAL | INTERRUPTOR GENERAL | 29/12/2024 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | ENGIE ENERGIA PERU |

## LA ARENA S.A.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | P1J87382 | Siemens | Siprotec 7SJ85 | BM1410002382 | Laboratorio Químico | 0.22 | Tablero General | IG | 30/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | P1J87382 | Siemens | Siprotec 7SJ85 | BM1410002382 | Sistema de Extracción de Gases | 0.46 | 170-TD-001B | QG | 30/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | P1J87382 | Siemens | Siprotec 7SJ85 | BM1410002382 | Sistema de Regeneración Térmica | 0.46 | Tablero General | IT1 | 30/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | P1J87382 | Siemens | Siprotec 7SJ85 | BM1410002382 | Sistema de Extracción de Gases | 0.46 | 170-TD-001 | QG | 30/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | P1J7795 | Siemens | Siprotec 7SJ85 | BM1507004412 | Sistema de Subdrenes | 0.46 | Tablero General | IG | 30/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | P1J7795 | Siemens | Siprotec 7SJ85 | BM1507004412 | Sistema de No Contacto | 0.46 | 160-SR-001 | IG | 30/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | P1J87382 | Siemens | Siprotec 7SJ85 | BM1410002382 | Sistema de Regeneración Térmica | 0.46 | Tablero General | IT2 | 30/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |

## INVERSIONES LENDIPO S.A.C.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | P3U306AAA1BCAA | SCHNEIDER ELECTRIC | P3U30 | SM2527412600872 | MPVES1 | 0.23 | TGN-1 | INTERRUPTOR GENERAL | 15/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | P3U306AAA1BCAA | SCHNEIDER ELECTRIC | P3U30 | SM2527412600872 | MPVES1 | 0.23 | TGN-2 | INTERRUPTOR GENERAL | 15/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ENGIE ENERGIA PERU |

## INVERSIONES LAMBORE S.A.C.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | P3U306AAA1BCAA | SCHNEIDER ELECTRIC | P3U30 | SM2448612600825 | MP CHORRILLOS | 0.23 | TGN-TR1 | I.G | 15/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |

## MAKRO SUPERMAYORISTA S.A.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | P94VB12B2B0066E | GENERAL ELECTRIC | MULTILIN AGILE | 369163281224 | MAKRO TRUJILLO | 0.38 | TABLERO GENERAL | IG | 12/04/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 210101 | MAKRO SANTA ANITA | 0.38 | TABLERO GENERAL | TG | 29/02/2024 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 181435 | MAKRO COMAS | 0.38 | TABLERO GENERAL | IG | 29/02/2024 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 181661 | MAKRO VES | 0.38 | TABLERO GENERAL | TG | 15/11/2018 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 210103 | MK SURCO | 0.38 | TABLERO GENERAL | TG | 29/02/2024 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |

## NEXA RESOURCES EL PORVENIR S.A.C.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTER. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | SCHNEIDER_S84_3502 | SCHNEIDER | S84 | 17150070 | SUBESTACION N°2 | 2.3 | L-3502 | 3502 | 02/01/2026 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | SCHNEIDER_S84_3504 | SCHNEIDER | S84 | 17110305 | SUBESTACION N°2 | 2.3 | L-3504 | 3504 | 02/01/2026 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | SEL_451_3202 | SEL | 451 | 2010176408 | SUBESTACION N°3 | 13.8 | L-3202 | 3202 | 02/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | SEL_451_3106 | SEL | 451 | 2010176405 | SUBESTACION N°3 | 13.8 | L-3106 | 3106 | 02/01/2026 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | SEL_451_3108 | SEL | 451 | 2010176409 | SUBESTACION N°3 | 13.8 | L-3108 | 3108 | 02/01/2026 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | SEL_451_3201 | SEL | 451 | 2010176412 | SUBESTACION N°3 | 13.8 | L-3201 | 3201 | 02/01/2026 | Etapa 6 | 59.5 | 60.0 | | | | 0.5 | 04/02/2026 11:22:35 | 04/02/2026 11:52:30 | 0:29:55,0 | F | NINGUNA | INCORRECTA | EMPRESA ELECTRICIDAD DEL PERU S.A. |

## MINERA BOROO MISQUICHILCA S.A.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTER. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | Relé F60 | General Electric | F60G00ACHF8FH6GM6BP6CUXXWXX | AAHC07000074 | SALA ELECTRICA POP1 | 4.16 | 0430-465-007C | 0430-465-007C | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | Relé F60 | General Electric | F60G00ACHF8FH6GM6BP6CUXXWXX | AAHC07000074 | SALA ELECTRICA POP1 | 4.16 | 0430-465-007D | 0430-465-007D | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | Relé F60 | General Electric | F60G00ACHF8FH6GM6BP6CUXXWXX | AAHC07000074 | SALA ELECTMERRIL CROWE | 4.16 | 0310-463-006A | 0310-463-006A | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | Relé F60 | General Electric | F60G00ACHF8FH6GM6BP6CUXXWXX | AAHC07000074 | SALA ELECTMERRIL CROWE | 4.16 | 0310-465-003B | 0310-465-003B | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | Relé F60 | General Electric | F60G00ACHF8FH6GM6BP6CUXXWXX | AAHC07000074 | SALA ELECTMERRIL CROWE | 4.16 | 0310-465-001A | 0310-465-001A | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | Relé F60 | General Electric | F60G00ACHF8FH6GM6BP6CUXXWXX | AAHC07000074 | SALA ELECTMERRIL CROWE | 4.16 | 0310-463-006B | 0310-463-006B | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | Relé F60 | General Electric | F60G00ACHF8FH6GM6BP6CUXXWXX | AAHC07000074 | SALA ELECTMERRIL CROWE | 4.16 | 0310-465-003A | 0310-465-003A | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | Relé F60 | General Electric | F60G00ACHF8FH6GM6BP6CUXXWXX | AAHC07000074 | SALA ELECTMERRIL CROWE | 4.16 | 0310-465-001B | 0310-465-001B | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | Relé F60 | General Electric | F60G00ACHF8FH6GM6BP6CUXXWXX | AAHC07000074 | SALA ELECTRICA PLS2 | 4.16 | 440-465-008A.B.C.D.E | 440-465-008A.B.C.D.E | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | Relé F60 | General Electric | F60G00ACHF8FH6GM6BP6CUXXWXX | AAHC07000074 | SALA ELECTRICA CIC | 4.16 | 4133-521-019-A.B.C | 4133-521-019-A.B.C | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | Relé F60 | General Electric | F60G00ACHF8FH6GM6BP6CUXXWXX | AAHC07000074 | SALA ELECTRICA BOOSTER | 4.16 | 420-465-001A.B | 420-465-001A.B | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | | ENGIE ENERGIA PERU |

**ALPAYANA S.A.**

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTER R. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | BAR 6 | PROTECTA | S24 | 192735 | C.C.CARMEN | 0.44 | COMP NC 23 | NC-23 | 28/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | BAR 6 | PROTECTA | S24 | 192735 | C.C.CARMEN | 0.44 | COMP NC 24 | NC-24 | 28/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | BAR 6 | PROTECTA | S24 | 192735 | C.C.CARMEN | 0.44 | COMP NC 22 | NC-22 | 28/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | BAR 6 | PROTECTA | S24 | 192735 | C.C.CARMEN | 0.44 | COMP NC 26 | NC-26 | 28/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | BAR 6 | PROTECTA | S24 | 192735 | C.C.CARMEN | 0.44 | COMP NC 27 | NC-27 | 28/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | BAR 6 | PROTECTA | S24 | 255139 | S.E.12 KV | 12.0 | MOLACH 310-ML 002 | 310-ML002 | 28/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | BAR 6 | PROTECTA | S24 | 192735 | C.C.CARMEN | 0.44 | COMP NC 21 | NC-21 | 28/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | BAR 6 | PROTECTA | S24 | 192735 | C.C.CARMEN | 0.44 | COMP NC 28 | NC-28 | 28/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | BAR 6 | PROTECTA | S24 | 192735 | C.C.CARMEN | 0.44 | COMP NC 34 | NC-34 | 28/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | SEL | SCHWEITZER | 751A | 3150860154 | S.E.3 | 0.44 | VEN 109 | VARIADOR 109 | 28/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | BAR 6 | PROTECTA | S24 | 210142 | S.E. PIQUE 790 | 0.44 | WIN CP-790 | CP-790 | 28/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | SEL | SCHWEITZER | 751A | 3150860154 | S.E.3 | 0.44 | VEN 120 | VARIADOR-120 | 28/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |

**MARCOBRE S.A.C.**

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | A01 | ABB | REF615 | 1VHR91457314 | MINE I (SKID) | 6.9 | A01 | A01 | 30/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | A01 | ABB | REF615 | 1VHR91457318 | MINE II (SKID) | 6.9 | A01 | A01 | 30/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | M5 | ABB | REF615 | 1VHR91452655 | MINE III (SKID) | 6.9 | M5 | M5 | 30/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | J6 | ABB | REF620 | 1VHR91432936 | RECTIFICADOR | 22.9 | J6 | J6 | 30/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | M2 | ABB | REM615 | 1VHR91445430 | PUERTO PU501 | 4.16 | M2 | M2 | 30/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | M4 | ABB | REM615 | 1VHR91445429 | PUERTO PU502 | 4.16 | M4 | M4 | 30/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | M5 | ABB | REM615 | 1VHR91445431 | PUERTO PU503 | 4.16 | M5 | M5 | 30/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | M8 | ABB | REF615 | 1VHR91673284 | PUERTO PU504 | 4.16 | M8 | M8 | 30/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | ENGIE ENERGIA PERU |

## SOCIEDAD MINERA CERRO VERDE S.A.A.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | C2-5230-RP-205 | ABB | ABB-REF-630 | 1VHR91102036 | San Carlos_Sala 11 | 34.5 | HPGR 25_C2 | C2-5230-CB-205 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | C2-5230-RP-104 | ABB | ABB-REF-630 | 1VHR91102032 | San Carlos_Sala 11 | 34.5 | HPGR 15_C2 | C2-5230-CB-104 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | C2-5220-RP-306 | ABB | ABB-REF-630 | 1VHR91116215 | San Luis_Sala 65 | 34.5 | Molino de Bolas 2_C2 | C2-5220-CB-306 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | C2-5230-RP-206 | ABB | ABB-REF-630 | 1VHR91102048 | San Carlos_Sala 11 | 34.5 | HPGR 26_C2 | C2-5230-CB-206 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | C2-5220-RP-209 | ABB | ABB-REF-630 | 1VHR91116208 | San Luis_Sala 65 | 34.5 | Molino de Bolas 3_C2 | C2-5220-CB-209 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | C2-5230-RP-113 | ABB | ABB-REF-630 | 1VHR91102049 | San Carlos_Sala 11 | 34.5 | HPGR 18_C2 | C2-5230-CB-113 | 01/01/2026 | Etapa 6 | 59.5 | 60.0 | | | | 3.79 | 04/02/2026 11:23:15 | 04/02/2026 11:42:15 | 0:19:00,0 | F | NINGUNA | INCORRECTA | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | C-3200-RP-001 | ABB | ABB-REF-630 | 1VHR91363522 | Sulfuros_Sala 2 | 22.9 | HPGR 31_C1 | C-3200-CB-001 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | C-5200-RP-009 | ABB | ABB-REF-630 | 1VHR91363548 | Sulfuros_Sala 1 | 22.9 | Relaves_C1 | C-5200-CB-009 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | C-3200-RP-002 | ABB | ABB-REF-630 | 1VHR91363530 | Sulfuros_Sala 2 | 22.9 | HPGR 32_C1 | C-3200-CB-002 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | 600-P3-RP-03 | ABB | ABB-REF-630 | 1VHR91419552 | Hidrometalurgia_PDC3 | 10.0 | Rectificador_B2_Hidro | 600-HVS-P3-03 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | 600-P3-RP-01 | ABB | ABB-REF-630 | 1VHR91149103 | Hidrometalurgia_PDC3 | 10.0 | Rectificador_B1_Hidro | 600-HVS-P3-01 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | C-3200-RP-009 | ABB | ABB-REF-630 | 1VHR91363533 | Sulfuros_Sala 2 | 22.9 | HPGR 34_C1 | C-3200-CB-009 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | C-5200-RP-027 | ABB | ABB-REF-630 | 1VHR91363532 | Sulfuros_Sala 1 | 22.9 | Molino de Bolas 3_C1 | C-5200-CB-027 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | C-5200-RP-028 | ABB | ABB-REF-630 | 1VHR91363516 | Sulfuros_Sala 1 | 22.9 | Molino de Bolas 4_C1 | C-5200-CB-028 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | C-3200-RP-007 | ABB | ABB-REF-630 | 1VHR91363528 | Sulfuros_Sala 2 | 22.9 | HPGR 33_C1 | C-3200-CB-007 | 01/01/2026 | Etapa 6 | 59.5 | 60.0 | | | | 3.75 | 04/02/2026 11:23:15 | 04/02/2026 11:42:15 | 0:19:00,0 | F | NINGUNA | INCORRECTA | KLP - KALLPA GENERACIÓN S.A. |

**MEXICHEM PERU**

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | Inyección - RRC2 | SEL | SEL 751A | 10233 | Planta de Inyección | 0.46 | Chiller 80 TON PE | INT-Q1 | 29/12/2020 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | Inyección - RRC2 | SEL | SEL 751A | 10233 | Planta de Inyección | 0.46 | INY 02 (HAITIAN 02) | INT-Q2 | 29/12/2020 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | Inyección - RRC2 | SEL | SEL 751A | 10233 | Planta de Inyección | 0.46 | Peletizadora (BAUSANO) | INT-Q3 | 29/12/2020 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | Extracción - RRC1 | SEL | SEL 751A | 10220 | Planta Extrusión PV | 0.46 | PVC Linea 02 | INT-Q4 | 29/12/2020 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | Extracción - RRC1 | SEL | SEL 751A | 10220 | Planta Extrusión PV | 0.46 | PVC Linea 10 | INT-Q5 | 29/12/2020 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | Extracción - RRC1 | SEL | SEL 751A | 10220 | Planta Extrusión PV | 0.46 | PVC Linea 12 | INT-Q6 | 29/12/2020 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | Inyección - RRC2 | SEL | SEL 751A | 10233 | Planta de Inyección | 0.46 | INY 12 (ENGEL 300 TL) | INT-Q7 | 29/12/2020 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | Inyección - RRC2 | SEL | SEL 751A | 10233 | Planta de Inyección | 0.46 | INY 07 (HAITIAN 4700) | INT-Q8 | 29/12/2020 | Etapa 6 | 59.5 | 60.0 | | | | 0.07 | 04/02/2026 11:22:00 | 04/02/2026 11:45:00 | 0:23:00,0 | F | NINGUNA | INCORRECTA | PLUZ ENERGIA PERU S.A.A |

**COMPANIA MINERA SAN IGNACIO DE MOROCOCHA S.A.A.**

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | RELE SIPROTEC | SIEMENS | 7SJ81 | BM2307016418 | SE San Vicente II | 0.46 | MOLINO 204 | IA-M204 | 23/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RELE SIPROTEC | SIEMENS | 7SJ81 | BM2307016418 | SE San Vicente II | 0.46 | SECADO-ZINC | IA-SEC-ZINC | 23/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RELE SIPROTEC | SIEMENS | 7SJ81 | BM2307016418 | SE San Vicente II | 0.46 | CHANCADO PRIMARIO Y SECUNDARIO | IA-CHAM | 23/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RELE SIPROTEC | SIEMENS | 7SJ81 | BM2307016418 | SE San Vicente II | 0.46 | MOLINO 203 | IA-M203 | 23/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RELE SIPROTEC | SIEMENS | 7SJ81 | BM2307016418 | SE San Vicente II | 0.46 | MOLINO 201 | IA-M201 | 23/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RELE SIPROTEC | SIEMENS | 7SJ81 | BM2307016418 | SE San Vicente II | 0.46 | MOLINO 202 | IA-M202 | 23/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RELE SIPROTEC | SIEMENS | 7SJ81 | BM2307016418 | SE San Vicente II | 0.46 | CCM FLOTACION | IA-CCM-TA | 23/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RELE SIPROTEC | SIEMENS | 7SJ81 | BM2307016418 | SE San Vicente II | 0.46 | CELDAS SCV-OK8 | IA-CELDAS-OK | 23/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | 0.0 | 04/02/2026 11:22:11 | 04/02/2026 11:22:11 | 0:00:00,0 | DF | NINGUNA | INCORRECTA | KLP - KALLPA GENERACIÓN S.A. |

## COMPAÑIA MINERA ANTAPACCAY S.A.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | 81_01 | ABB | REF630 | 1VHR91194607 | Casa de Fuerza | 10.0 | Campamentos 2 y 3 | SGM-0001K07 | 31/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CELEPSA |
| Zona A | 81_06 | ABB | REF630 | 1VHR91194591 | Casa de Fuerza | 10.0 | Chabuca Tintaya (PIT SUR) | SGM-0001K10 | 31/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CELEPSA |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | 81_07 | ABB | REF630 | 1VHR91194609 | Casa de Fuerza | 4.16 | Chancado Secundario - Tintaya | SGM-0002K06 | 31/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | | CELEPSA |
| Zona A | 81_05 | ABB | REF630 | 1VHR91194622 | Casa de Fuerza | 10.0 | Mina Tintaya (PIT NORTE) | SGM-0001K06 | 31/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | | CELEPSA |
| Zona A | 81_08 | ABB | REF630 | 1VHR91031326 | SE Transporte Mineral | 33.0 | Motor 01 - Faja Overland ANT | SGM-000152-02 | 31/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | | CELEPSA |
| Zona A | 81_09 | ABB | REF630 | 1VHR91031325 | SE Transporte Mineral | 33.0 | Motor 02 - Faja Overland ANT | SGM-000152-03 | 31/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | | CELEPSA |
| Zona A | 81_10 | ABB | REF630 | 1VHR91184936 | S.E. Agua Recuperada | 33.0 | Agua recuperada 01 | SGM-000152-01 | 31/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | | CELEPSA |
| Zona A | 81_03 | SIEMENS | 7SD86 | BM2403014268 | Casa de Fuerza | 10.0 | Planta Oxidos | SGM-0001K05 | 31/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | CELEPSA |
| Zona A | 81_04 | SIEMENS | 7SD86 | BM2403014263 | Casa de Fuerza | 10.0 | Planta Oxidos | SGM-0001K16 | 31/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | CELEPSA |
| Zona A | 81_14 | SIEMENS | 7SJ6321-4EB91-3FE0/EE | BF1101117462 | SE. Principal 33KV | 33.0 | Transformador Convertidor Molino 2 | SGM-0001H-14 | 31/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | | CELEPSA |
| Zona A | 81_15 | ABB | REF630 | 1VHR91194616 | Casa de Fuerza | 10.0 | Estación de Bombas PS1 ( Area 100) | SGM-0001K08 | 31/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | 1.83 | 04/02/2026 11:23:00 | 04/02/2026 11:31:00 | 0:08:00,0 | F | NINGUNA | INCORRECTA | | CELEPSA |

## TIENDAS PERUANAS SA

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | RELE 1 | ABB | REF630 | 1VHR91423838 | SE OECH SLE JIRON DE LA UNION | 10.0 | Aire Acondicionado 1 | TF.AA1.JR | 27/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RELE 1 | ABB | REF630 | 1VHR91423838 | SE OECH SLE | 10.0 | Aire Acondicionado 2 | TF.AA2 | 27/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACI |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | JIRON DE LA UNION | | | | | | | | | | | | | | | | | | ÓN S.A. |
| Zona A | RELE 2 | ABB | REF630 | 1VHR91422787 | SE OECH SLE PUCALLPA | 10.0 | Roof Top 1 | HACIART.01 | 28/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RELE 2 | ABB | REF630 | 1VHR91422787 | SE OECH SLE PUCALLPA | 10.0 | Roof Top 2 | HACIART.02 | 28/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RELE 2 | ABB | REF630 | 1VHR91422787 | SE OECH SLE PUCALLPA | 10.0 | Roof Top 3 | HACIART.03 | 28/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RELE 3 | ABB | REF630 | 1VHR91422784 | SE OECH SLE TRUJILLO | 10.0 | Alumbrado 1 TR | TD.A1.TR | 28/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RELE 3 | ABB | REF630 | 1VHR91422784 | SE OECH SLE TRUJILLO | 10.0 | Condensador 2 | TD.F.TR | 29/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RELE 3 | ABB | REF630 | 1VHR91422784 | SE OECH SLE TRUJILLO | 10.0 | Condensador 3 | UC 2.02 | 29/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RELE 3 | ABB | REF630 | 1VHR91422784 | SE OECH SLE TRUJILLO | 10.0 | Condensador 4 | UC 2.03 | 29/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RELE 3 | ABB | REF630 | 1VHR91422784 | SE OECH SLE TRUJILLO | 10.0 | Condensador 5 | UC 2.04 | 29/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RELE 3 | ABB | REF630 | 1VHR91422784 | SE OECH SLE TRUJILLO | 10.0 | Fuerza TR | UC 2.05 | 29/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RELE 4 | ABB | REF630 | 1VHR91422785 | SE OECH SLE AREQUIPA | 10.0 | Aire Acondicionado 10 | TF.AA1 .B | 30/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RELE 4 | ABB | REF630 | 1VHR91422785 | SE OECH SLE AREQUIPA | 10.0 | Aire Acondicionado 11 | TF.AA2 .B | 30/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RELE 4 | ABB | REF630 | 1VHR91422785 | SE OECH SLE AREQ | 10.0 | Aire Acondicionado 9 | TF.EV2.B | 30/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | UIPA | | | | | | | | | | | | | | | | | | |
| Zona A | RELE 5 | ABB | REF630 | 1VHR91422786 | SE OECH SLE CUSCO | 10.0 | CHILLER 1 | UE.UC1 | 31/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RELE 5 | ABB | REF630 | 1VHR91422786 | SE OECH SLE CUSCO | 10.0 | CHILLER 2 | UE.UC2 | 31/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | RELE 5 | ABB | REF630 | 1VHR91422786 | SE OECH SLE CUSCO | 10.0 | CHILLER 3 | UE.UC3 | 31/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |

## PROANCO S.R.L

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | 16021 | FANOX | SIUC000C0A0CAB | 23450541 | Sala de Compresores | 0.46 | Compresor 1 | ITCF1 | 19/12/2023 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | 16021 | FANOX | SIUC000C0A0CAB | 23450541 | Sala de Compresores | 0.46 | Compresor 2 | ITCF2 | 19/12/2023 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | 16021 | FANOX | SIUC000C0A0CAB | 23450541 | Sala de Compresores | 0.46 | Compresor 3 | ITCF3 | 19/12/2023 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | 16021 | FANOX | SIUC000C0A0CAB | 23450541 | Sala de Compresores | 0.46 | Compresor 4 | ITCF4 | 19/12/2023 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | 16021 | FANOX | SIUC000C0A0CAB | 23450541 | Sala de Compresores | 0.46 | Compresor 5 | ITCF5 | 19/12/2023 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | 16021 | FANOX | SIUC000C0A0CAB | 23450541 | Sala de Compresores | 0.46 | Compresor 6 | ITCF6 | 19/12/2023 | Etapa 6 | 59.5 | 60.0 | | | | 0.0 | 04/02/2026 11:22:00 | 04/02/2026 11:52:00 | 0:30:00,0 | F | NINGUNA | INCORRECTA | KLP - KALLPA GENERACIÓN S.A. |

## PERUPLAST S A

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | SUBESTACION 5 | SEL | SEL_751 | 3231095477 | SUBESTACION 5 | 0.38 | C6 | C6 | 10/10/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CONSORCIO ELECTRICO DE |

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| | | | | | | | | | | | | | | | | | | | | | | | VILLACURI S.A.C. |
| Zona A | SUBESTACION 5 | SEL | SEL_751 | 3231095477 | SUBESTACION 5 | 0.38 | C10 | C10 | 10/10/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | SUBESTACION 5 | SEL | SEL_751 | 3231095477 | SUBESTACION 5 | 0.38 | C23 | C23 | 10/10/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | SUBESTACION 5 | SEL | SEL_751 | 3231095477 | SUBESTACION 5 | 0.38 | C24 | C24 | 10/10/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | SUBESTACION 5 | SEL | SEL_751 | 3231095477 | SUBESTACION 5 | 0.38 | Cortadora / Gofrado | C4 | 10/10/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | SUBESTACION 5 | SEL | SEL_751 | 3231095477 | SUBESTACION 5 | 0.38 | C7 | C7 | 10/10/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | SUBESTACION 5 | SEL | SEL_751 | 3231095477 | SUBESTACION 5 | 0.38 | C8 | C8 | 10/10/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | SUBESTACION 5 | SEL | SEL_751 | 3231095477 | SUBESTACION 5 | 0.38 | C1 | C1 | 10/10/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | SUBESTACION 5 | SEL | SEL_751 | 3231095477 | SUBESTACION 5 | 0.38 | C3 | C3 | 10/10/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | SUBESTACION 5 | SEL | SEL_751 | 3231095477 | SUBESTACION 5 | 0.38 | C5 | C5 | 10/10/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | SUBESTACION 5 | SEL | SEL_751 | 3231095477 | SUBESTACION 5 | 0.38 | C17 | C17 | 10/10/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | SUBESTACION 5 | SEL | SEL_751 | 3231095477 | SUBESTACION 5 | 0.38 | C19 | C19 | 10/10/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | SUBESTACION 5 | SEL | SEL_751 | 3231095477 | SUBESTACION 5 | 0.38 | Extrusora 16 | C22 | 10/10/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | SUBESTACION 2 | SEL | SEL_751 | 3242765660 | SUBESTACION 2 | 0.38 | Extrusora Polymera | C1 | 10/10/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | SUBESTACION 2 | SEL | SEL_751 | 3242765660 | SUBESTACION 2 | 0.38 | Laminadora LCS-01 | C3 | 10/10/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | SUBESTACION 2 | SEL | SEL_751 | 3242765660 | SUBESTACION 2 | 0.38 | Laminadora LCS-04 | C6 | 10/10/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | SUBESTACION 2 | SEL | SEL_751 | 3242765660 | SUBESTACION 2 | 0.38 | Extrusora KIEFFEL | C7 | 10/10/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | SUBESTACION 2 | SEL | SEL_751 | 3242765660 | SUBESTACION 2 | 0.38 | Laminadora LCS-03 | C4 | 10/10/2025 | Etapa 6 | 59.5 | 60.0 | | | | 0.027 | 04/02/2026 11:23:00 | 04/02/2026 11:43:00 | 0:20:00,0 | F | NINGUNA | INCORRECTA | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | SUBESTACION 2 | SEL | SEL_751 | 3242765660 | SUBESTACION 2 | 0.38 | Laminadora LCS-02 | C5 | 10/10/2025 | Etapa 6 | 59.5 | 60.0 | | | | 0.035 | 04/02/2026 11:23:00 | 04/02/2026 11:43:00 | 0:20:00,0 | F | NINGUNA | INCORRECTA | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |

**INMOBILIARIA PISAC S.A.C.**

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTER. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | UBFNAAAAABAZFNNBXD | ABB | REF 630 | 1VHR91440987 | PARQUE CAÑETE | 0.38 | TG-1 | INTERRUPTOR GENERAL | 11/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | UBFNAAAAABAZFNNBXD | ABB | REF 630 | 1VHR91440987 | PARQUE CAÑETE | 0.38 | TG-2 | INTERRUPTOR GENERAL | 11/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |

**CEMENTOS PACASMAYO S.A.A. (S.E. GUADALUPE 60 KV + S.E. PIURA OESTE 220 KV)**

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | 81U | General Electric | F60H03AKHF8LH6AMXXPXXUXXWXX | AAHC09001725 | SE CEMENTOS PACASMAYO | 6.3 | MOLINO CRUDO 2 | 50 | 30/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 81U | ABB | REM630_C | 1VHR91144682 | SE CEMENTOS PIURA | 6.3 | MOLINO CRUDO | K03 | 30/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 81U | ABB | REM630_C | 1VHR91144680 | SE CEMENTOS PIURA | 6.3 | ID FAN CRUDO | K04 | 30/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 81U | General Electric | F60H03AKHF8LH6AMXXPXXUXXWXX | AAHC09001725 | SE CEMENTOS PACASMAYO | 6.3 | MOLINO CEMENTO 6 | 66 | 30/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 81U | General Electric | F60H03AKHF8LH6AMXXPXXUXXWXX | AAHC09001725 | SE CEMENTOS PACASMAYO | 6.3 | ID FAN CEMENTO 6 | 67 | 30/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |
| Zona A | 81U | General Electric | F60H03AKHF8LH6AMXXPXXUXXWXX | AAHC09001725 | SE CEMENTOS PACASMAYO | 6.3 | SEPARADOR CRUDO 2 | 54 | 30/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | | | | | | | | EMPRESA ELECTRICIDAD DEL PERU S.A. |

**POLINPLAST S.A.C**

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTER. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTER. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 183114 | Subestacion 1 | 0.4 | FCS-1250 | Q3-LEGRAND DPX630 | 29/12/2024 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CELEPSA |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 183114 | Subestacion 1 | 0.4 | NB-100 | Q2-LEGRAND DPX630 | 29/12/2024 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CELEPSA |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 183114 | Subestacion 1 | 0.4 | BMB-1100 | Q1-LEGRAND DPX630 | 29/12/2024 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | CELEPSA |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 183114 | Subestacion 1 | 0.4 | FCS-850 | SIEMENS VL400 | 29/12/2024 | Etapa 6 | 59.5 | 60.0 | | | | 0.11 | 04/02/2026 11:23:36 | 04/02/2026 11:28:36 | 0:05:00,0 | F | NINGUNA | INCORRECTA | CELEPSA |

## PAPELERA DEL SUR S A

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTER. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTER. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | REL1 | SIEMENS | P1J615264 | BM2206011428 | Sub Estacion de Distribución MT/BT 1 - Molino | 10.0 | CBT BI PULPER | BI PULPER | 26/07/2023 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | REL1 | SIEMENS | P1J615264 | BM2206011428 | Sub Estacion de Distribución MT/BT 1 - Molino | 10.0 | CBT BELOIT 2 | BEL 2 | 26/07/2023 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | REL1 | SIEMENS | P1J615264 | BM2206011428 | Sub Estacion de Distribución MT/BT 3 - Molino | 10.0 | CBT FAN TK8 TK9 | FANT K89 | 26/07/2023 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | REL1 | SIEMENS | P1J615264 | BM2206011428 | Sub Estacion de Distribución MT/BT | 10.0 | CBT VACIOS MESA | VACIOS MESA | 26/07/2023 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 2 - Molino | | | | | | | | | | | | | | | | | | |
| Zona A | RE L1 | SIEMENS | P1J615264 | BM2206011428 | Sub Estación de Distribución MT/BT 2 - Molino | 10.0 | CBT VACIOS PRENSAS | VACIOS PRENSA | 26/07/2023 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |

## PETROLEOS DEL PERU PETROPERU S.A.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | SEL-451 | SEL | 451 | 1112450367 | SET | 2.4 | PLANTA DE OSMOSIS INVERSA | C.28 | 26/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | SEL-451 | SEL | 451 | 1112450367 | SET | 2.4 | NUEVO MUELLE PLANTA LASTRE | C.22 | 26/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | SEL-451 | SEL | 451 | 1112450367 | SET | 2.4 | CASA BOMBA N ° 06;07;08 | C.16 | 26/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | SEL-451 | SEL | 451 | 1112450367 | SET | 2.4 | PUNTA ARENAS | C.20 | 26/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | SEL-451 | SEL | 451 | 1112450367 | SET | 2.4 | CASA BOMBA N ° 5 | C.21 | 26/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | SEL-451 | SEL | 451 | 1112450367 | SET | 2.4 | BAS OP1; OP2; OP3 | C.07 | 26/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | SEL-451 | SEL | 451 | 1112450367 | SET | 2.4 | TRANSPORTES | C.01 | 26/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | SEL-451 | SEL | 451 | 1112450367 | SET | 2.4 | CCC-SERV. INDUSTRIALES | C.08 | 26/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | SEL-451 | SEL | 451 | 1112450367 | SET | 2.4 | CRAQUEO CATALITICO - SS.II | C.17 | 26/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | SEL-451 | SEL | 451 | 1112450367 | SET | 2.4 | BAS OP1; OP2; OP3 | C.18 | 26/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SE1 | 0.48 | TAB SERVICIOS ALIM NORMAL SALA DE CONTROL | LASP.SE1.01 | 26/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SE1 | 0.48 | TAB SERVICIOS ALIM NORMAL COMEDOR | LASP.SE1.02 | 26/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SE1 | 0.48 | TAB SERVICIOS ALIM NORMAL TOPICO MEDICO | LASP.SE1.03 | 26/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | Multilin F650 | GE | F650 | 82686302 | SO7 | 0.48 | TR-20-SO7-01 | SWG.0.SO7.01 | 26/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | Multilin F650 | GE | F650 | 82673602 | SO4 | 0.48 | TR-20-SO4-01 | SWG.0.SO4.01 | 26/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | Multilin F650 | GE | F650 | 82686303 | SO4 | 0.48 | TR-20-SO4-02 | EDP.0.SO4.01 | 26/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | Multilin F650 | GE | F650 | 83663401 | SO5 | 0.48 | TR-20-SO5-01-A | SWG.0.SO5.01.A | 26/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | Multilin F650 | GE | F650 | 82821301 | SO9 | 0.48 | TR-20-SO9-01-A | SWG.0.SO9.01.A | 26/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | Multilin F650 | GE | F650 | 82821303 | SO9 | 0.48 | TR-20-SO9-01-B | SWG.0.SO9.01.B | 26/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SE2 | 4.16 | RECYCLE COMPRESSOR A | HTN.MK.001.A | 26/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SE2 | 4.16 | RECYCLE COMPRESSOR B | HTN.MK.001.B | 26/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | REM 620 | ABB | REM 620 | 1VHR91222442 | SE2 | 4.16 | HYDROGEN MAKE-UP COMPRESSOR A | HTN.MK.002.A | 26/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | REM 620 | ABB | REM 620 | 1VHR91222457 | SE2 | 4.16 | HYDROGEN MAKE-UP COMPRESSOR B | HTN.MK.002.B | 26/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTU | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SE2 | 4.16 | FEED PUMPS A | HTN.MP.001.A | 26/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ADOR | | | | | | | | | | | | | | | | | | | | | | SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SE2 | 4.16 | FEED PUMPS B | HTN.MP.001.B | 26/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SE1 | 4.16 | COOLING AIR BLOWER A | WSA.MFA.001.A,VSD.2.SE1.01.A | 26/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SE1 | 4.16 | COOLING AIR BLOWER B | WSA.MFA.001.B,VSD.2.SE1.01.B | 26/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SE1 | 4.16 | CLEAN GAS BLOWER A | WSA.MFA.003.A,VSD.2.SE1.03.A | 26/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SE1 | 4.16 | CLEAN GAS BLOWER B | WSA.MFA.003.B,VSD.2.SE1.03.B | 26/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SO2 | 4.16 | TRANSFORMADOR 4;16/0.48 KV PARA SWG-0-SO2-00 | TR.20.SO2.01.A | 26/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SO2 | 4.16 | TRANSFORMADOR 4;16/0.48 KV PARA SWG-0-SO2-01 | TR.20.SO2.01.B | 26/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SO2 | 4.16 | MOTOR DE BOMBAS DE ALTA PRESION DE 1° PASO DE OSMOSIS A | OR2.MP.016.A,VSD.2.SO2.01.A | 26/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SO2 | 4.16 | MOTOR DE BOMBAS DE ALTA PRESION DE 1° PASO DE OSMOSIS C | OR2.MP.016.C,VSD.2.SO2.01.C | 26/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SO2 | 4.16 | MOTOR DE BOMBAS DE ALTA PRESION DE 1° PASO DE OSMOSIS B | OR2.MP.016.B,VSD.2.SO2.01.B | 26/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SO2 | 4.16 | MOTOR DE BOMBAS DE ALTA PRESION DE 1° PASO DE OSMOSIS D | OR2.MP.016.D,VSD.2.SO2.01.D | 26/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SO2 | 4.16 | MOTOR DE BOMBAS DE ALTA PRESION DE 2° PASO DE OSMOSIS B | OR2.MP.018.B,VSD.2.SO2.02.B | 26/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | Multilin F650 | GE | F650 | 82673701 | SO7 | 0.48 | ACOMETIDA RED SWG-0-SO7-01 | EDP.0.SO7.01 | 26/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SE2 | 0.48 | STRIPPER BOTTOM PUMPS | HTN.MP.003.A | 26/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SE2 | 0.48 | STRIPPER BOTTOM PUMPS | HTN.MP.003.B | 26/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SE2 | 0.48 | SPLITTER REBOILER PUMPS | HTN.MP.006.A | 26/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SE2 | 0.48 | SPLITTER REBOILER PUMPS | HTN.MP.006.B | 26/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SE2 | 0.48 | SPLITTER REFLUX PUMPS | HTN.MP.004.A | 26/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SE2 | 0.48 | SPLITTER REFLUX PUMPS | HTN.MP.004.B | 26/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.3 | | | | | | | | GM OPERACIONES SAC |
| Zona A | REF 630 | ABB | REF 630 | 1VHR91237339 | SO3 | 4.16 | LLEGADA SWG-2-SEP-01-B | SWG.2.SO3.01.B | 26/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SO2 | 4.16 | MOTOR DE BOMBAS DE ALTA PRESION DE 2° PASO DE OSMOSIS A | OR2.MP.018.A,VSD.2.SO2.02.A | 26/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTU | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SO2 | 4.16 | MOTOR DE BOMBAS | OR2.MP.018.C,VSD.2.SO2.02.C | 26/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | GM OPERACIONES |

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| | ADOR | | | | | | DE ALTA PRESION DE 2° PASO DE OSMOSIS C | | | | | | | | | | | | | | | | SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SE2 | 4.16 | H2 RICH GAS COMPRESSOR A | RCA.MK.002.A | 26/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SE2 | 4.16 | H2 RICH GAS COMPRESSOR B | RCA.MK.002.B | 26/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | GM OPERACIONES SAC |
| Zona A | REM 620 | ABB | REM 620 | 1VHR91232458 | SO1 | 4.16 | BOMBA DE DIESEL B5 PARA MUELLE A | TKS.MP.006.A | 26/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | GM OPERACIONES SAC |
| Zona A | REM 620 | ABB | REM 620 | 1VHR91232449 | SO1 | 4.16 | BOMBA DE DIESEL B5 PARA MUELLE B | TKS.MP.006.B | 26/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | GM OPERACIONES SAC |
| Zona A | SEL-451 | SEL | 451 | 1112450367 | SET | 2.4 | CASA DE BOMBA 06;07;08 | C.06 | 26/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | GM OPERACIONES SAC |
| Zona A | Multilin F650 | GE | F650 | 82635102 | SO5 | 0.48 | TR-20-SO5-01-B | SWG.0.SO5.01.B | 26/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SE1 | 4.16 | AIR BLOWER A | WSA.MFA.002.A,VSD.2.SE1.02.A | 26/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SE1 | 4.16 | AIR BLOWER B | WSA.MFA.002.B,VSD.2.SE1.02.B | 26/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | GM OPERACIONES SAC |
| Zona A | SEL-451 | SEL | 451 | 1112450367 | SET | 2.4 | CASA DE BOMBA N° 5 | C.09 | 26/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | GM OPERACIONES SAC |
| Zona A | REM 630 | ABB | REM 630 | 1VHR91217930 | SE1 | 4.16 | FEED PUMPS A | HTD.MP.005.A | 26/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | GM OPERACIONES SAC |
| Zona A | REM 630 | ABB | REM 630 | 1VHR91217931 | SE1 | 4.16 | FEED PUMPS B | HTD.MP.005.B | 26/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | GM OPERACIONES SAC |
| Zona A | REF 630 | ABB | REF 630 | 1VHR91237338 | SO3 | 4.16 | LLEGADA SWG-2-SEP-01-A | SWG.2.SO3.01.A | 26/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SE2 | 0.48 | HEAVY NAPHTHA PRODUCT PUMPS | HTN.MP.005.A | 26/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | GM OPERACIONES SAC |
| Zona A | RTU AK3 - ACTUADOR | SIEMENS | SICAM AK3 | 6MF11130CJ480AA0BB | SE2 | 0.48 | HEAVY NAPHTHA PRODUCT PUMPS | HTN.MP.005.B | 26/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | GM OPERACIONES SAC |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | REM 620 | ABB | REM 620 | 1VHR91217919 | SE1 | 4.16 | BOMBAS TURBO A1 A MU1/MU2 | TKS.MP.007.A | 26/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | | | | | | | | | GM OPERACIONES SAC |
| Zona A | REM 620 | ABB | REM 620 | 1VHR91217916 | SE1 | 4.16 | BOMBAS TURBO A1 A MU1/MU2 | TKS.MP.007.B | 26/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | | | | | | | | | GM OPERACIONES SAC |
| Zona A | REM 620 | ABB | REM 620 | 1VHR91232460 | SO1 | 4.16 | BOMBA DE NAFTA FCC ALTO AZUFRE | TKS.MP.020.A | 26/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | | | | | | | | | GM OPERACIONES SAC |
| Zona A | REM 620 | ABB | REM 620 | 1VHR91247218 | SO1 | 4.16 | BOMBA DE NAFTA FCC ALTO AZUFRE | TKS.MP.020.B | 26/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | | | | | | | | | GM OPERACIONES SAC |
| Zona A | REM 620 | ABB | REM 620 | 1VHR91232465 | SO1 | 4.16 | BOMBA DE NAFTA ESTABILIZADA A MU1 | TKS.MP.027.A | 26/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | | | | | | | | | GM OPERACIONES SAC |
| Zona A | REM 620 | ABB | REM 620 | 1VHR91232450 | SO1 | 4.16 | BOMBA DE NAFTA ESTABILIZADA A MU1 | TKS.MP.027.B | 26/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | | | | | | | | | GM OPERACIONES SAC |

## Plaza Vea Oriente S.A.C.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | F01 | GENERAL ELECTRIC | P94VB12B2B0066E | 36916327 | PLAZA VEA HUÁNUCO | 0.38 | TG-TR1; TG-TR2 | IG | 30/12/2024 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |

## ANGLO AMERICAN QUELLAVECO S.A.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | +J26 | SIEMENS | 7SJ85 | BM1812003522 | PAPUJUNE | 22.9 | PAPUJUNE CAMPAMENTO | J26 | 27/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | PT01_4310MC020 | SIEMENS | 7UT85 | BM1907008965 | ESTACION DREN | 4.16 | ESTACION DREN | 52-01 | 27/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | PT01_4320MC160 | SIEMENS | 7UT85 | BM1907008981 | TORRES 1 | 4.16 | TORRES 1 | 52-01 | 27/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | +J25 | SIEMENS | 7SJ85 | BM1812003528 | PAPUJUNE | 22.9 | PAPUJUNE CONVEYOR | J25 | 27/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |

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| | | | | | | | OVERLAND | | | | | | | | | | | | | | | | | |
| Zona A | PM01_2630SG001 | SIEMENS | 7SJ85 | BM1908000678 | CHANCADORA PRIMARIA | 22.9 | CHANCADORA PRIMARIA 01 | J02 | 27/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | PM02_2630SG001 | SIEMENS | 7SJ85 | BM1908000800 | CHANCADORA PRIMARIA | 22.9 | CHANCADORA PRIMARIA 02 | J03 | 27/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | PT01_4330MC001 | SIEMENS | 7UT85 | BM1907008937 | INTERMEDIA | 4.16 | INTERMEDIA | 52-01 | 27/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | PT01_4320MC140 | SIEMENS | 7UT85 | BM2212002602 | TORRES 2 | 4.16 | TORRES 2 | 52-01 | 27/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | +J23 | SIEMENS | 7SJ85 | BM1812003809 | PAPUJUNE | 22.9 | PAPUJUNE LOOP MINA 01 | J23 | 27/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | +J32 | SIEMENS | 7SJ85 | BM1812003516 | PAPUJUNE | 22.9 | PAPUJUNE LOOP MINA 02 | J32 | 27/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | PT01_1120MC001 | SIEMENS | 7UT85 | BM1907008949 | TITIRE | 4.16 | TITIRE | 52-01 | 27/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | PT01_1130MC001 | SIEMENS | 7UT85 | BM1907008953 | VIZCACHA | 4.16 | VIZCACHA | 52-01 | 27/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | PT04_3310SG003 | SIEMENS | 7SJ85 | BM1907009036 | FLOTACION | 4.16 | FLOTACION AGITADOR ROUGHER FILA 2 | 52-04 | 27/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | PT10_3310SG003 | SIEMENS | 7SJ85 | BM1907008991 | FLOTACION | 4.16 | FLOTACION AGITADOR ROUGHER FILA 4 | 52-10 | 27/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | PT05_3310SG003 | SIEMENS | 7SJ85 | BM1907009003 | FLOTACION | 4.16 | FLOTACION AGITADOR ROUGHER FILA 1 | 52-05 | 27/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | PT07_3310SG003 | SIEMENS | 7SJ85 | BM1907008504 | FLOTACION | 4.16 | FLOTACION AGITADOR ROUGHER FILA 3 | 52-07 | 27/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | PT08_3310SG003 | SIEMENS | 7SJ85 | BM1907008985 | FLOTACION | 4.16 | FLOTACION AGITADOR CLEANUP FILA 01 | 52-08 | 27/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | | ENGIE ENERGIA PERU |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | PM01_3720MC002 | SIEMENS | 7UT85 | BM2206014409 | CPF | 4.16 | CPF | 52-01 | 27/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | PT09_3310SG003 | SIEMENS | 7SJ85 | BM1907009015 | FLOTACION | 4.16 | FLOTACION AGITADOR CLEANUP FILA 02 | 52-09 | 27/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | 1.0 | 04/02/2026 11:23:15 | 04/02/2026 11:36:00 | 0:12:45,0 | F | NINGUNA | INCORRECTA | ENGIE ENERGIA PERU |
| Zona A | PT11_3310SG003 | SIEMENS | 7SJ85 | BM1907009018 | FLOTACION | 4.16 | FLOTACION BLOWER CU MO | 52-11 | 27/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | 1.5 | 04/02/2026 11:23:15 | 04/02/2026 11:36:00 | 0:12:45,0 | F | NINGUNA | INCORRECTA | ENGIE ENERGIA PERU |
| Zona A | PM01_3320SG002 | SIEMENS | 7SJ85 | BM1908000684 | REMOLIENDA | 22.9 | REMOLIENDA 2 | J02 | 06/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |

## INMOBILIARIA EL QUINDE S.A.C.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | P3U306AAA1BCAA | SCHNEIDER ELECTRIC | P3U30 | SM2508312600115 | MPICA | 0.38 | H&M | C-01 | 11/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | P3U306AAA1BCAA | SCHNEIDER ELECTRIC | P3U30 | SM2508312600115 | MPICA | 0.38 | CASA IDEAS | C-02 | 11/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ENGIE ENERGIA PERU |
| Zona A | P3U306AAA1BCAA | SCHNEIDER ELECTRIC | P3U30 | SM2508312600115 | MPICA | 0.38 | NLN03 | C-03 | 11/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ENGIE ENERGIA PERU |

## El quinde shopping plaza S.A.C.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | 6AAA1BCAA | SCHNEIDER ELECTRIC | P3U30 | SM2448612600828 | MEGAPLAZA CAJAMARCA | 0.23 | TG-BT | INTERRUPTOR GENERAL | 11/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ELECTRO SUR MEDIO |

## SERVICIOS DE MOLDES PLASTICOS S.A.C.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | P14332SH6?0B30L | SCHNEIDER ELECT | MICOMP 143 | 123456M | SE3 | 0.38 | Interruptor - incom | BMB850-3 | 26/12/2021 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |

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| | | RIC | | | | | er | | | | | | | | | | | | | | | | |
| Zona A | P14332SH6?0B30L | SCHNEIDER ELECTRIC | MICOMP 143 | 123456M | SE3 | 0.38 | Interruptor - incomer | NETSATL 860-2 | 26/12/2021 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | P14332SH6?0B30L | SCHNEIDER ELECTRIC | MICOMP 143 | 744225F | SE2 | 0.22 | Interruptor - incomer | TG 220V | 27/12/2020 | Etapa 6 | 58.6 | 0.15 | | | | 0.0 | 04/02/2026 11:23:00 | 04/02/2026 11:43:00 | 0:20:00,0 | F | NINGUNA | INCORRECTA | ORYGEN PERU S.A.A. |

## SAN MIGUEL INDUSTRIAS PET S.A.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | R2 | SIEMENS | 7SJ81 | BM2101004772 | SE1E | 0.46 | LINEA 9 | TG1E-1 / C6 | 20/12/2024 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | R2 | SIEMENS | 7SJ81 | BM2101004772 | SE1E | 0.46 | LINEA 12 | TG1E-2 / C7 | 20/12/2024 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | R2 | SIEMENS | 7SJ81 | BM2101004772 | SE1E | 0.46 | LINEA 8 | TG1E-1 / C5 | 20/12/2024 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | R2 | SIEMENS | 7SJ81 | BM2101004772 | SE1E | 0.46 | LINEA 10 | TG1E-2 / C9 | 20/12/2024 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | R2 | SIEMENS | 7SJ81 | BM2101004772 | SE1E | 0.46 | LINEA 18 | TG1E-2 / C15 | 20/12/2024 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | R2 | SIEMENS | 7SJ81 | BM2101004772 | SE1E | 0.46 | LINEA 19 | TG1E-1 / C3 | 20/12/2024 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | R2 | SIEMENS | 7SJ81 | BM2101004772 | SE1E | 0.46 | LINEA 14 | TG1E-1 / C8 | 20/12/2024 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | R2 | SIEMENS | 7SJ81 | BM2101004772 | SE1E | 0.46 | LINEA 20 | TG1E-2 / C6 | 20/12/2024 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | R1 | SIEMENS | 7SJ81 | BM2310012206 | SE1C | 0.44 | AOKI 2 Y 3 | TG1C-2 / C5 | 20/12/2024 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | R1 | SIEMENS | 7SJ81 | BM2310012206 | SE1C | 0.44 | TABLERO TERMOFORMADORAS ANTIGUAS Y COMPRESORES | TG1C-2 / C15 | 20/12/2024 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |

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| Zona A | R1 | SIEMENS | 7SJ81 | BM2310012206 | SE1C | 0.44 | COMPRESOR ABC 1 | TG1C-1 / C13 | 20/12/2024 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | R1 | SIEMENS | 7SJ81 | BM2310012206 | SE1C | 0.44 | COMPRESOR 9 | TG1C-1 / C9 | 20/12/2024 | Etapa 6 | 59.5 | 60.0 | | | | 0.135 | 04/02/2026 11:22:00 | 04/02/2026 11:50:00 | 0:28:00,0 | F | NINGUNA | INCORRECTA | KLP - KALLPA GENERACIÓN S.A. |

## SUPERMERCADOS PERUANOS SOCIEDAD ANONIMA

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 210139 | PLAZA VEA OSLO VES | 0.38 | SUB GENERAL 1 | TG-380-1 | 29/02/2024 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 210139 | PLAZA VEA OSLO VES | 0.22 | SUB GENERAL 1 | TG-220 | 29/02/2024 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 210099 | PLAZA VEA OSLO VES | 0.38 | SUB GENERAL 2 | TG-380-2 | 29/02/2024 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |

## TECNOLOGICA DE ALIMENTOS S.A.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | POWER LOGIC P5V20 | Schneider Electric | P5V20 | 21241110049 | RECHAZO CARGA PIS (POWER LOGIC P5V20) | 0.44 | RC-PIS PRIMERA ETAPA | | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | POWER LOGIC P5V20 | Schneider Electric | P5V20 | 21241920070 | RECHAZO CARGA MAT (POWER LOGIC P5V20) | 0.44 | RC-MAT PRIMERA ETAPA | | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | POWER LOGIC P5V20 | Schneider Electric | P5V20 | 21241110049 | RECHAZO CARGA PIS (POWER LOGIC P5V20) | 0.44 | RC-PIS SEGUNDA ETAPA | | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | POWER LOGIC P5V20 | Schneider Electric | P5V20 | 21241920070 | RECHAZO CARGA MAT (POWER LOGIC P5V20) | 0.44 | RC-MAT SEGUNDA ETAPA | | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | POWER LOGIC P5V20 | Schneider Electric | P5V20 | 21241110049 | RECHAZO CARGA PIS (POWER LOGIC P5V20) | 0.44 | RC-PIS TERCERA ETAPA | | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | POWER LOGIC P5V20 | Schneider Electric | P5V20 | 21241920070 | RECHAZO CARGA MAT (POWER LOGIC P5V20) | 0.44 | RC-MAT TERCERA ETAPA | | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | POWER LOGIC P5V20 | Schneider Electric | P5V20 | 21241110049 | RECHAZO CARGA PIS (POWER LOGIC P5V20) | 0.44 | RC-PIS CUARTA ETAPA | | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | POWER LOGIC P5V20 | Schneider Electric | P5V20 | 21241920070 | RECHAZO CARGA MAT (POWER LOGIC P5V20) | 0.44 | RC-MAT CUARTA ETAPA | | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | POWER LOGIC P5V20 | Schneider Electric | P5V20 | 21241110049 | RECHAZO CARGA PIS (POWER LOGIC P5V20 | 0.44 | RC-PIS QUINTA ETAPA | | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |

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| Zona A | POWER LOGIC P5V20 | Schneider Electric | P5V20 | 21241920070 | RECHAZO CARGA MAT (POWER LOGIC P5V20) | 0.44 | RC-MAT QUINTA ETAPA | | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | POWER LOGIC P5V20 | Schneider Electric | P5V20 | 21241110049 | RECHAZO CARGA PIS (POWER LOGIC P5V20) | 0.44 | RC-PIS SEXTA ETAPA | | 01/01/2026 | Etapa 6 | 59.5 | 60.0 | | | | 0.0 | 04/02/2026 11:19:17 | 04/02/2026 11:45:00 | 0:25:43,0 | F | NINGUNA | INCORRECTA | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | POWER LOGIC P5V20 | Schneider Electric | P5V20 | 21241920070 | RECHAZO CARGA MAT (POWER LOGIC P5V20) | 0.44 | RC-MAT SEXTA ETAPA | | 01/01/2026 | Etapa 6 | 59.5 | 60.0 | | | | 0.0276 | 04/02/2026 11:19:17 | 04/02/2026 11:45:00 | 0:25:43,0 | F | NINGUNA | INCORRECTA | KLP - KALLPA GENERACIÓN S.A. |

## FAC NAC DE ACUMULADORES ETNA S.A.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | 16021 | FANOX | SIUC000C0A0CAB | 23450538 | Planta Independencia | 0.23 | Ampliación de sala de cargadores | Tablero TC1 Int. General | 29/12/2023 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | 0.0872 | 04/02/2026 07:23:42 | 04/02/2026 12:25:32 | 5:01:50,0 | F | NINGUNA | INCORRECTA | FENIX POWER PERU |
| Zona A | 16021 | FANOX | SIUC000C0A0CAB | 23450538 | Planta Independencia | 0.23 | Sala de cargadores de sovema 1 | Tablero TD11 Int. General | 29/12/2023 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | FENIX POWER PERU |
| Zona A | 16021 | FANOX | SIUC000C0A0CAB | 23450538 | Planta Independencia | 0.23 | Area de ensamblaje | Tablero STD 1 Int. General | 29/12/2023 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | FENIX POWER PERU |
| Zona A | 16021 | FANOX | SIUC000C0A0CAB | 23450538 | Planta Independencia | 0.23 | Sala de cargadores de sovema 2 | Tablero STD 12 Int. General | 29/12/2023 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | FENIX POWER PERU |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | 16021 | FANOX | SIUC000C0A0CAB | 23450538 | Planta Independencia | 0.23 | Area de ensamblaje | Tablero STD 2 Int. General | 29/12/2023 | Etapa 6 | 59.5 | 60.0 | | | | | | | | | | | | FENIX POWER PERU |

**TECNOFIL S.A.**

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | G1 | ABB | REF630 | 1VHR91243994 | Subestación A | 0.46 | A330 | QA72A | 30/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | G1 | ABB | REF630 | 1VHR91243994 | Subestación A | 0.46 | A132 | QA90 | 30/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | G1 | ABB | REF630 | 1VHR91243994 | Subestación A | 0.46 | A110 | QB88 | 30/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | G1 | ABB | REF630 | 1VHR91243994 | Subestación A | 0.46 | A1920 | QA32 | 30/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | G1 | ABB | REF630 | 1VHR91243994 | Subestación A | 0.46 | A1640 | QA30 | 30/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | G1 | ABB | REF630 | 1VHR91243994 | Subestación A | 0.46 | A520 | QA71B | 30/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | G1 | ABB | REF630 | 1VHR91243994 | Subestación A | 0.46 | A1660 | QA31 | 30/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | G1 | ABB | REF630 | 1VHR91243994 | Subestación A | 0.46 | A136 | QA34 | 30/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | G1 | ABB | REF630 | 1VHR91243994 | Subestación C | 0.46 | A137 | S19 | 30/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | G1 | ABB | REF630 | 1VHR91243994 | Subestación D | 0.46 | A410 | S17 | 30/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | G1 | ABB | REF630 | 1VHR91243994 | Subestación C | 0.46 | A134 | QC31 | 30/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | G1 | ABB | REF630 | 1VHR91243994 | Subestación C | 0.46 | A127 | QC13 | 30/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | G1 | ABB | REF630 | 1VHR91243994 | Subestación B | 0.46 | A130 | QB12 | 30/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | G1 | ABB | REF630 | 1VHR91243994 | Subestación B | 0.46 | A115 | QB11 | 30/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | G1 | ABB | REF630 | 1VHR91243994 | Subestación B | 0.46 | A300 | QB60 | 30/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | G1 | ABB | REF630 | 1VHR91243994 | Subestación D | 0.46 | A1610 | QD11 | 30/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | ORYGEN PERU |

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| Zona A | G1 | ABB | REF630 | 1VHR91243994 | Subestación A | 0.46 | A320 | QA71A | 30/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | 0.04 | 04/02/2026 11:22:00 | 04/02/2026 11:52:00 | 0:30:00,0 | F | NINGUNA | INCORRECTA | ORYGEN PERU S.A.A. |
| Zona A | G1 | ABB | REF630 | 1VHR91243994 | Subestación C | 0.46 | A620 | QC30 | 30/12/2025 | Etapa 6 | 59.5 | 60.0 | | | | 0.1 | 04/02/2026 11:22:00 | 04/02/2026 11:52:00 | 0:30:00,0 | F | NINGUNA | INCORRECTA | ORYGEN PERU S.A.A. |

## TECNOLOGIA TEXTIL S.A.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | R-01 | NREC | PCS-9691 | BD192723 | Subestación TCP6 | 0.575 | TDE-OMNI220-1a | CF1a | 20/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | R-01 | NREC | PCS-9691 | BD192723 | Subestación TCP6 | 0.575 | TDE-OMNI220-1b | CF1b | 20/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | R-01 | NREC | PCS-9691 | BD192723 | Subestación TCP6 | 0.6 | TDE-OMNI220-2a | CF2a | 20/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | R-01 | NREC | PCS-9691 | BD192723 | Subestación TCP6 | 0.6 | TDE-OMNI220-2b | CF2b | 20/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | R-01 | NREC | PCS-9691 | BD192723 | Subestación SED-01 | 0.44 | TG2-LF1 | CLF1 | 20/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | R-01 | NREC | PCS-9691 | BD192723 | Subestación TCP6 | 0.575 | TDE-OMNI220-3a | CF3a | 20/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | R-01 | NREC | PCS-9691 | BD192723 | Subestación TCP6 | 0.575 | TDE-OMNI220-3b | CF3b | 20/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | R-01 | NREC | PCS-9691 | BD192723 | Subestación TCP6 | 0.575 | TDE-OMNI220-4a | CF4a | 20/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | R-01 | NREC | PCS-9691 | BD192723 | Subestación TCP6 | 0.575 | TDE-BIELA-5a | CF5a | 20/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | R-01 | NREC | PCS-9691 | BD192723 | Subestación TCP6 | 0.575 | TDE-BIELA-5b | CF5b | 20/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | R-01 | NREC | PCS-9691 | BD192723 | Subestación TCP6 | 0.575 | TDE-BIELA-6a | CF6a | 20/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | R-01 | NREC | PCS-9691 | BD192723 | Subestación TCP6 | 0.575 | TDE-BIELA-6b | CF6b | 20/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | R-01 | NREC | PCS-9691 | BD192723 | Subestación TCP6 | 0.575 | TDE-BIELA-7a | CF7a | 20/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | R-01 | NREC | PCS-9691 | BD192723 | Subestación TCP6 | 0.575 | TDE-BIELA-7b | CF7b | 20/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | R-01 | NREC | PCS-9691 | BD192723 | Subestación TCP6 | 0.575 | TDE-BIELA-8a | CF8a | 20/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | R-01 | NREC | PCS-9691 | BD192723 | Subestación TCP6 | 0.575 | TDE-BIELA-8b | CF8b | 20/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | R-01 | NREC | PCS-9691 | BD192723 | Subestación TCP7 | 0.46 | TDE-OMNI190-1a | CF1a | 20/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | R-01 | NREC | PCS-9691 | BD192723 | Subestación TCP7 | 0.46 | TDE-OMNI190-1b | CF1b | 20/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | R-01 | NREC | PCS-9691 | BD192723 | Subestación TCP7 | 0.46 | TDE-OMNI190-2a | CF2a | 20/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | R-01 | NREC | PCS-9691 | BD192723 | Subestación TCP7 | 0.46 | TDE-OMNI190-2b | CF2b | 20/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | R-01 | NREC | PCS-9691 | BD192723 | Subestación TCP7 | 0.46 | TDE-OMNI190-3a | CF3a | 20/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |
| Zona A | R-01 | NREC | PCS-9691 | BD192723 | Subestación SED-02 | 0.46 | INGERSOLL RAND 3 | IT-COMP-01 | 20/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | ORYGEN PERU S.A.A. |

## CORPORACION TURISTICA PERUANA S.A.C

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 192738 | SUBESTACIÓN PRINCIPAL | 0.22 | C-13 | MARKESINA | 12/01/2021 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 192738 | SUBESTACIÓN PRINCIPAL | 0.22 | C-24 | AA. C. CHILLER | 12/01/2021 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 192738 | SUBESTACIÓN PRINCIPAL | 0.22 | F-15 | LAVAJILLAS | 12/01/2021 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 192738 | SUBESTACIÓN PRINCIPAL | 0.22 | C-5 | SOTANO 4 | 12/01/2021 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 192738 | SUBESTACIÓN PRINCIPAL | 0.22 | C-7 | INYECTOR SOTANO 2 | 12/01/2021 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 192738 | SUBESTACIÓN PRINCIPAL | 0.22 | C-4 | SOTANO 2 | 12/01/2021 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 192738 | SUBESTACIÓN PRINCIPAL | 0.22 | C-2 | SOTANO 1 | 12/01/2021 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 192738 | SUBESTACIÓN PRINCIPAL | 0.22 | C-7 | REPOSTERO MARMOL | 12/01/2021 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | PLUZ ENERGIA PERU S.A.A |

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| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 192738 | SUBESTACIÓN PRINCIPAL | 0.22 | PANEL B | LUTRON B | 12/01/2021 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 192738 | SUBESTACIÓN PRINCIPAL | 0.22 | PANEL L | LUTRON L | 12/01/2021 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 192738 | SUBESTACIÓN PRINCIPAL | 0.22 | PANEL G | LUTRON G | 12/01/2021 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 192738 | SUBESTACIÓN PRINCIPAL | 0.22 | C-10 | PASADIZO REPOSTERO 1 | 12/01/2021 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 192738 | SUBESTACIÓN PRINCIPAL | 0.22 | PANEL D | LUTRON D | 12/01/2021 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | S24-VAR6 | PROTECTA | S24-VAR6 | 192738 | SUBESTACIÓN PRINCIPAL | 0.22 | PANEL E | LUTRON E | 12/01/2021 | Etapa 6 | 59.5 | 60.0 | | | | 0.027 | 04/02/2026 11:14:59 | 04/02/2026 11:40:00 | 0:25:01,0 | F | NINGUNA | INCORRECTA | PLUZ ENERGIA PERU S.A.A |

## TEXTILES CAMONES S.A.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | 16021 | FANOX | SIUC000C0A0CAB | 24280089 | SUBESTACIÓN 01 | 0.38 | ITM Maq. Percha; Lijadora; Mario Crosta | ITM Maq. Percha; Lijadora; Mario Crosta | 02/01/2024 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | 16021 | FANOX | SIUC000C0A0CAB | 24280089 | SUBESTACIÓN 01 | 0.22 | Tablero del área de tejiduría | ITM TD - Tejiduría | 02/01/2024 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | 16021 | FANOX | SIUC000C0A0CAB | 24280089 | SUBESTACIÓN 01 | 0.22 | Tablero del área de tejiduría | ITM TD - Tejiduría | 02/01/2024 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | 16021 | FANOX | SIUC000C0A0CAB | 24280089 | SUBESTACIÓN 01 | 0.22 | Tableros autosoportados costura; corte y estampados de prendas | ITM T Autosoportador, corte y estampado | 02/01/2024 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | 16021 | FANOX | SIUC000C0A0CAB | 24280089 | SUBESTACIÓN 01 | 0.22 | Tablero del área de corte | ITM TD - Corte | 02/01/2024 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CONSORCIO ELECTRI |

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| Zona A | 16021 | FANOX | SIUC000C0A0CAB | 24280088 | SUBESTACIÓN 02 | 0.4 | Tablero de estampado de telas máquinas en general - Mersan | ITM Estampado - Mersan | 02/01/2024 | Etapa 4 | 58.6 | 0.15 | | | | 0.0582 | 04/02/2026 11:22:20 | 04/02/2026 11:40:20 | 0:18:00,0 | F | NINGUNA | INCORRECTA | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | 16021 | FANOX | SIUC000C0A0CAB | 24280088 | SUBESTACIÓN 02 | 0.4 | Tablero de lavanderías - Pipeteadora y 5 máquinas circulares | ITM Lavandería - Pipeteadora -5 Maq. Circulares | 02/01/2024 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | 16021 | FANOX | SIUC000C0A0CAB | 24280089 | SUBESTACIÓN 01 | 0.22 | Tablero del área de costura y estampado de prenda | ITM Costura y Estampado | 02/01/2024 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | 16021 | FANOX | SIUC000C0A0CAB | 24280089 | SUBESTACIÓN 01 | 0.22 | Tablero del área de costura - Tomaco. ilum. | ITM Costura y Tomaco. Ilum - 9 | 02/01/2024 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | 16021 | FANOX | SIUC000C0A0CAB | 24280089 | SUBESTACIÓN 01 | 0.22 | Tablero del área de costura - Tomaco. ilum. | ITM Costura y Tomaco. Ilum - 8 | 02/01/2024 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | 16021 | FANOX | SIUC000C0A0CAB | 24280089 | SUBESTACIÓN 01 | 0.22 | Acabado de tela ilum. y tomaco. y Tablero Zona de Percha ilum. y tomaco. | ITM Tela, Tomaco. Percha, ilum. | 02/01/2024 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | 16021 | FANOX | SIUC000C0A0CAB | 24280088 | SUBESTACIÓN 02 | 0.22 | Tablero de estampado de tela aire acond. ATA N°02 y Garita N°02 | ITM estampado - AACC ATA Nro 02 y Garit. Nro 02 | 02/01/2024 | Etapa 6 | 59.5 | 60.0 | | | | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | RC-AND-002 | GE | F60 | AAHC15002291 | SE And Antiguo | 4.16 | Campamentos; oficinas y talleres | IN6216 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | FENIX POWER PERU |
| Zona A | RC-AND-002 | GE | F60 | AAHC15002293 | SE And Antiguo | 4.16 | Talleres; oficinas laboratorio | IN6215 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | FENIX POWER PERU |
| Zona A | RC-AND-002 | GE | F60 | AAHC08000457 | SE And Antiguo | 4.16 | Subestación Chancado | IN6217 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | FENIX POWER PERU |
| Zona A | RC-AND-002 | GE | F60 | AAHC08000455 | SE And Antiguo | 4.16 | SUB ESTACION PAND 2 | IN6219 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | FENIX POWER PERU |
| Zona A | RC-ANDNUE-001 | GE | F60 | AAHC10001847 | SE And Nuevo | 4.16 | Ventilador NV 800; Ventilador Superficie | IN6105 | 01/01/2026 | Etapa 6 | 59.5 | 60.0 | 0.0 | 0.0 | 0.0 | 1.58 | 04/02/2026 11:23:00 | 04/02/2026 11:57:00 | 0:34:00,0 | F | NINGUNA | INCORRECTA | FENIX POWER PERU |
| Zona A | RC-MTU-001 | GE | F650 | S_80450516 | SE Marh Tunel | 2.4 | Circuito Campamentos | IN5001 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | FENIX POWER PERU |
| Zona A | RC-NV570-001 | GE | F60 | AAHC17000698 | SE NV570 | 4.16 | Campamentos Andaychagua | Salida03 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | FENIX POWER PERU |
| Zona A | RC-NV570-001 | GE | F60 | AAHC17000698 | SE NV570 | 4.16 | Circuito Bombeo | Salida05 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | FENIX POWER PERU |
| Zona A | RC-VIC-001 | GE | F60 | AAHC07000301 | SE Planta Victoria | 4.16 | Molino Allis Chalmer | Salida 07 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | FENIX POWER PERU |
| Zona A | RC-VIC-001 | GE | F60 | AAHC07000301 | SE Planta Victoria | 4.16 | Molino Marcy | Salida 06 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | FENIX POWER PERU |
| Zona A | RC-SAN-001 | GE | F60 | AAHD04000691 | SE San Antonio | 10.0 | Casa Compresora | Salida 03 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | FENIX POWER PERU |
| Zona A | RC-SAN-002 | GE | F60 | AAHD04000694 | SE San Antonio | 10.0 | Circuito SE Movil - Nv 390 | IN9238 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | FENIX POWER PERU |
| Zona A | RC-SAN-002 | GE | F60 | AAHD04000692 | SE San Antonio | 10.0 | Circuito Nueva Carahuacra | IN9237 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | FENIX POWER PERU |
| Zona A | RC-SCR-001 | GE | F60 | AAHC10001886 | SE San Crist | 2.4 | Campamentos San | IN6016 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | FENIX POWER PERU |

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| | | | | | obal Antiguo | | Cristobal | | | | | | | | | | | | | | | | |
| Zona A | RC-SCR-001 | SIEMENS | SIPROTEC | BM2104001032 | SE San Cristobal I | 4.16 | Operaciones 2 | IN9246 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | FENIX POWER PERU |
| Zona A | RC-TIC-001 | GE | F60 | AAHC07001412 | SE Ticlio | 2.4 | Operaciones Mina (L4) | L4 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | 0.0 | 0.0 | 0.0 | | | | | | | | FENIX POWER PERU |

## ASOCIACIÓN EDUCACIONAL WILLIAMSON DEL PERU

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | P3U30-6AAA1BCAA | SCHNEIDER | P3U30 | SM240220103 | SUBESTACION GENERAL | 0.22 | Estacionamiento | ITM_ESTACIONAMIENTO | 31/12/2025 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | P3U30-6AAA1BCAA | SCHNEIDER | P3U30 | SM240220103 | SUBESTACION GENERAL | 0.22 | AA Jarriman | ITM_AA JARRIMAN | 31/12/2025 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | P3U30-6AAA1BCAA | SCHNEIDER | P3U30 | SM240220103 | SUBESTACION GENERAL | 0.22 | Educacion Fisica | ITM_EDUCACION FISICA | 31/12/2025 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | P3U30-6AAA1BCAA | SCHNEIDER | P3U30 | SM240220103 | SUBESTACION GENERAL | 0.22 | Cocina | ITM_COCINA | 31/12/2025 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |
| Zona A | P3U30-6AAA1BCAA | SCHNEIDER | P3U30 | SM240220103 | SUBESTACION GENERAL | 0.22 | Biblioteca Audiovisual | ITM_BIBLIOTECA AUDIOVISUAL | 31/12/2025 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | CONSORCIO ELECTRICO DE VILLACURI S.A.C. |

## XIMESA

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | P14331BH6M0430J | SCHNEIDER ELECT | MICOMP 143 | 39639335 | SE2 | 0.22 | Interruptor - feeder | CLF 750-1 | 20/12/2020 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | PLUZ ENERGIA PERU |

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| | | RIC | | | | | | | | | | | | | | | | | | | | | S.A.A |
| Zona A | P14331BH6M0430J | SCHNEIDER ELECTRIC | MICOMP 143 | 39639335 | SE2 | 0.22 | Interruptor - feeder | CLF 750-2 | 20/12/2020 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | P14331BH6M0430J | SCHNEIDER ELECTRIC | MICOMP 143 | 39636319 | SE1 | 0.22 | Interruptor - feeder | CLF 850 | 20/12/2020 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | P14331BH6M0430J | SCHNEIDER ELECTRIC | MICOMP 143 | 39636319 | SE1 | 0.22 | Interruptor - feeder | CLF 1050 | 20/12/2020 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | P14331BH6M0430J | SXHNEIDER ELECTRIC | MICOMP 143 | 39636319 | SE1 | 0.22 | Interruptor - feeder | CLF 650 | 20/12/2020 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | P14331BH6M0430J | SCHNEIDER ELECTRIC | MICOMP 143 | 39639333 | SE3 | 0.22 | Interruptor - feeder | NPM 1400 | 27/12/2020 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | P14331BH6M0430J | SCHNEIDER ELECTRIC | MICOMP 143 | 39636319 | SE1 | 0.22 | Interruptor - feeder | BMB 350 | 20/12/2020 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | P14331BH6M0430J | SCHNEIDER ELECTRIC | MICOMP 143 | 39639333 | SE3 | 0.22 | Interruptor - feeder | Calefacción | 27/12/2020 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | P14331BH6M0430J | SCHNEIDER ELECTRIC | MICOMP 143 | 39639335 | SE2 | 0.22 | Interruptor - feeder | BMB 450 | 20/12/2020 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | P14331BH6M0430J | SCHNEIDER ELECTRIC | MICOMP 143 | 39639333 | SE3 | 0.22 | Interruptor - feeder | BMB 550-1 | 27/12/2020 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | P14331BH6M0430J | SCHNEIDER ELECTRIC | MICOMP 143 | 39639335 | SE2 | 0.22 | Interruptor - feeder | BMB 1400-1 | 20/12/2020 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | P14331BH6M0430J | SCHNEIDER ELECTRIC | MICOMP 143 | 39639333 | SE3 | 0.22 | Interruptor - feeder | BMB 850-1 | 27/12/2020 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | P14331BH6M0430J | SCHNEIDER ELECTRIC | MICOMP 143 | 39639334 | SE6 | 0.22 | Interruptor - feeder | NPM500 | 20/12/2020 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | P14331BH6M0430J | SCHNEIDER ELECTRIC | MICOMP 143 | 39639334 | SE6 | 0.22 | Interruptor - feeder | Ducto barra 800A | 20/12/2020 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | P14331BH6M0430J | SCHNEIDER ELECTRIC | MICOMP 143 | 39639334 | SE6 | 0.22 | Interruptor - feeder | Molinos | 20/12/2020 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | PLUZ ENERGIA PERU S.A.A |
| Zona A | P14331BH6M0430J | SCHNEIDER ELECTRIC | MICOMP 143 | 39639334 | SE6 | 0.22 | Interruptor - feeder | Negri Bossi NB400 | 20/12/2020 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | PLUZ ENERGIA PERU S.A.A |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | P14331BH6M0430J | SCHNEIDER ELECTRIC | MICOMP 143 | 39639334 | SE6 | 0.22 | Interruptor - feeder | Soplad ora-1 | 20/12/2020 | Etapa 6 | 59.5 | 60.0 | | | | 0.0 | 04/02/2026 11:23:00 | 04/02/2026 11:43:00 | 0:20:00,0 | F | NINGUNA | INCORRECTA | PLUZ ENERGIA PERU S.A.A |
| Zona A | P14331BH6M0430J | SCHNEIDER ELECTRIC | MICOMP 143 | 39639335 | SE2 | 0.22 | Interruptor - feeder | BMB1100 | 20/12/2020 | Etapa 6 | 59.5 | 60.0 | | | | 0.0 | 04/02/2026 11:23:00 | 04/02/2026 11:43:00 | 0:20:00,0 | F | NINGUNA | INCORRECTA | PLUZ ENERGIA PERU S.A.A |

## MINERA YANACOCHA S.R.L.

| ZONA | COD. RELÉ | MARCA | MODELO | N° SERIE | SE | kV | CIRCUITO | COD. INTERR. | FECHA IMPLEM. | ETAPA | ARRANQUE UMBRAL (Hz) | TIEMPO UMBRAL (seg) | ARRANQUE DERIV. (Hz) | df/dt (Hz/s) | TIEMPO DERIV. (seg) | DEMANDA INTERR. (MW) | INICIO DD/MM/YYYY HH:MM:SS | FINAL DD/MM/YYYY HH:MM:SS | DURACIÓN HH:MM:SS | SEÑALIZ. DISPARO | COMP. ESPERADO DEL RELÉ | EVALUAC. ACTUACIÓN | SUMINISTRADOR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zona A | 001 | GE | F60 | AAHC18000618 | SE C14 | 4.16 | IN-2202111 | IN-2202111 | 01/01/2026 | Etapa 1 | 59.2 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | 002 | GE | F60 | AAHD05000100 | SE LA PAJUELA | 22.9 | IN-204 | IN-204 | 01/01/2026 | Etapa 2 | 59.0 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | 003 | GE | F60 | AAHC09001809 | SE TR2 | 4.16 | IN-21764 | IN-21764 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | 004 | GE | F60 | AAHC09001817 | SE TR3 | 4.16 | IN-21762 | IN-21762 | 01/01/2026 | Etapa 3 | 58.8 | 0.15 | 59.8 | -1.0 | 0.15 | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | 005 | GE | SR750 | A2740173 | SE PAMPALARGA | 22.9 | IN-106 | IN-106 | 01/01/2026 | Etapa 4 | 58.6 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | 006 | GE | F60 | AAHC09000519 | SE TR1 | 4.16 | IN-2176 | IN-2176 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | 007 | GE | F60 | AAHC16000275 | SE TR4 | 4.16 | IN-220122 | IN-220122 | 01/01/2026 | Etapa 5 | 58.5 | 0.15 | | | | | | | | | | | KLP - KALLPA GENERACIÓN S.A. |
| Zona A | 008 | GE | SR750 | A2730898 | SE PAMPALARGA | 22.9 | IN-102 | IN-102 | 01/01/2026 | Etapa 6 | 59.5 | 60.0 | | | | 0.2 | 04/02/2026 11:23:15 | 04/02/2026 11:37:27 | 0:14:12,0 | F | NINGUNA | INCORRECTA | KLP - KALLPA GENERACIÓN S.A. |