



PROYECTO FINAL DE GRADO

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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DEDICATORIA

A Dios, quien me ha sostenido en cada paso de este proceso. Mi fe en Él me ha dado la confianza necesaria para alcanzar esta meta.

A mis padres, quienes siempre creyeron en mí y me acompañaron en cada paso de este camino. Su apoyo incondicional es mi mayor tesoro.

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A todos los amigos que fui conociendo a lo largo de este proceso, con buenos amigos la carrera pesa un poquito menos.



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RESUMEN

Este proyecto de fin de grado consiste en optimizar la función de búsqueda de fallas en los ETC (Equipos Tele Comandados) instalados en los alimentadores de la ES-COV.

El objetivo de esta optimización es reducir el tiempo necesario para localizar fallas en las redes de media tensión, aprovechando la funcionalidad de los equipos ya instalados en dichas redes.

Para alcanzar este objetivo, se llevaron a cabo investigaciones del proceso a optimizar y simulaciones de cortocircuito utilizando el software Cymdisth versión 7.1, lo que permitió generar una base de datos. Además, se desarrolló un bot de Telegram utilizando el lenguaje de programación Python.

El resultado de este trabajo es una herramienta que mejorará el proceso de búsqueda de fallas mediante dicha función de los ETC. Concretamente, se trata de un bot de Telegram denominado "@Buscafallas_bot". Este bot solicita al usuario seleccionar un alimentador y el tipo de falla, seguido de la entrada del valor de la falla. Luego, proporciona al usuario un enlace a Google Maps que indica la ubicación de la falla. A partir de esta ubicación, aguas arriba, la cuadrilla comenzará su búsqueda del punto de falla.

Con esta optimización es posible lograr la reducción del tiempo de búsqueda de fallas de los alimentadores de la ES-COV, logrando también una posible reducción del costo de falla para la sociedad, y de la pérdida por energía no facturada (PENF) para la ANDE.



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ABSTRACT

This final degree project aims to optimize the fault detection function in the ETC (Telecommanded Equipment) installed in the ES-COV feeder lines. The objective of this optimization is to reduce the time required to locate faults in medium-voltage networks by leveraging the functionality of the equipment already installed in these networks.

To achieve this objective, investigations of the process to be optimized were conducted, along with short-circuit simulations using Cymdisth software version 7.1, which enabled the generation of a database. Additionally, a Telegram bot was developed using the Python programming language.

The result of this work is a tool that will enhance the fault detection process through the ETC function. Specifically, it is a Telegram bot called "@Buscafallas_bot." This bot prompts the user to select a feeder and the type of fault, followed by entering the fault value. It then provides the user with a link to Google Maps indicating the fault's location. Based on this location, the maintenance crew will begin their search for the point of fault. This optimization has the potential to reduce the fault detection time in ES-COV feeder lines, leading to a possible reduction in societal fault costs and Unaccounted for Energy Loss (PENF) for ANDE.



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INTRODUCCIÓN

La reducción del tiempo de búsqueda de fallas en redes de media tensión es un punto clave para las empresas distribuidoras de energía eléctrica [1]. Según [2], se puede minimizar el valor de la energía no suministrada en caso de un fuera de servicio y mejorar la continuidad de la provisión de energía eléctrica con una ubicación óptima de reconectores automáticos en redes de media tensión.

La innovación es una base fundamental para lograr el objetivo de mejorar el servicio de energía eléctrica en términos de calidad y continuidad. Es por esta razón que la ANDE lleva a cabo jornadas de exposición y premiación de las mejores prácticas e innovaciones tecnológicas desarrolladas por sus funcionarios en diversas regiones. Durante estas exposiciones, se presentó el trabajo realizado por Edgar Báez, Stella Brizuela y Moisés Britez: 'Consulta inteligente del Sistema de Distribución (CIMAD)'. Este proyecto consiste en un bot de Telegram diseñado para facilitar el acceso a la información solicitada del sistema de distribución [3].

A partir del año 2021 la ANDE da inicio al proceso de implementación de equipos telecomandados en redes de media tensión, se espera que el seccionamiento de las líneas pueda reducir el tiempo de reposición del suministro eléctrico en casos de falla o algún evento que cause interrupciones del servicio [4]. Estos equipos que están integrados al sistema SCADA que permite su control y supervisión, y serán telecomandados desde un Centro de Operación de Distribución [5].

Sin embargo existe una función de dichos equipos telecomandados que no se está aprovechando a su máximo potencial. A partir de la mitad del año 2022 en la ES-COV se comenzó a implementar la localización de fallas por medio de estos equipos, el cual muestra dentro del sistema SCADA la distancia de la falla desde el equipo o el valor de cortocircuito, ahora bien, el operador de línea como también el despachante de carga deben de realizar varios procesos dentro del sistema GIS o simular el evento para localizar el punto exacto o la zona de falla, conllevando un tiempo considerable para los actores, motivo por el cual en ciertas ocasiones opta por el procedimiento de descarte de tramos para ubicar el punto de fallas.

El procedimiento de restitución del servicio post-falla se dificulta cuando la falla ocurre durante la noche, cuando existen inclemencias climáticas o también en caso de que los

alimentadores tengan una longitud importante tal como los alimentadores COV 7 y COV 8, que tienen una longitud de 47,2 km y 48 km aproximadamente, lo cual hace que el restablecimiento del servicio sea más prolongado, esto genera disminución de calidad del servicio y también pérdidas por costo de falla, como por ejemplo se tiene que en el año 2017 el COV 7 tuvo una pérdida promedio por costo de falla de 1.900.398.770,87 Gs. y el COV 8 de 8.053.296.689,87 Gs.¹. Vemos entonces que el tiempo de ubicación de fallas es clave para buscar disminuir el tiempo de reposición de servicio en los casos de fuera de servicio de los alimentadores.

Con este trabajo se pretende optimizar el proceso de ubicación de fallas que se realiza a través de los equipos tele comandados para los alimentadores de la ES-COV de la ANDE, a través de un Bot de Telegram que ayudará a reducir el tiempo de búsqueda de fallas en las líneas de MT.

Con esta optimización se desea aumentar la confiabilidad del sistema agilizando el trabajo que realizan los operadores, despachantes de carga y las cuadrillas de distribución cuando existan interrupciones del suministro eléctrico en los alimentadores a causa de fallas, esto favorecerá a los clientes que se vean afectados por dicha interrupción pues tendrán un menor tiempo de espera para la reposición del servicio, además se reducirán pérdidas económicas a la ANDE y a los clientes causadas por la interrupción del servicio durante casos de falla en los alimentadores.

¹ Datos calculados según resumen ejecutivo de Asistencia Técnica para la Elaboración de los Estudios de Costos y Tarifas, Caracterización y Estudios de la Demanda de la Energía Eléctrica y formulación de Escenarios Económicos. ANDE

1. OBJETIVOS

1.1. Objetivo General

Optimizar la función de localización de fallas de los equipos telecomandados para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

1.2. Objetivos específicos

- Relevar datos y esquema unifilar de los alimentadores de la ES-COV
- Estudiar el proceso que realizan los equipos telecomandados para la ubicación de fallas.
- Realizar un estudio de cortocircuitos por medio de simulaciones de los alimentadores en estudio.
- Generar base de datos de los alimentadores en estudio.
- Programar Bot para la simplificación del proceso que se realizan con los equipos telecomandados para la ubicación de fallas.

2. MARCO TEÓRICO

2.1. SISTEMA DE DISTRIBUCIÓN

Un sistema de distribución de energía eléctrica es un conjunto de equipos que permiten energizar de forma segura y fiable a un número determinado de usuarios (cargas). En distintos niveles de tensión, ubicados generalmente en diferentes lugares [6].

La alimentación del sistema está compuesta básicamente por un alimentador eléctrico que es un conductor que como su nombre lo indica es el encargado de suministrar toda la corriente que un grupo de carga consume [6].

2.2. EQUIPOS TELECOMANDADOS

Equipo electromecánico y electrónico de distribución con la capacidad de comando remoto, local eléctrica y manual con la funcionalidad de adquisición de datos del SED (**Sistema Eléctrico de Distribución**) en tiempo real a través del SCADA (Sistema de Supervisión, Control y Adquisición de Datos) [7].

2.2.1. FUNCION DE UBICACIÓN DE FALLAS

Cada dispositivo de la serie Rec15/25 cuenta con la función incorporada "Localizador de Falla" que determina la distancia al punto de falla y otras características. Esta función está disponible en modos Reconectador y Seccionalizador. La máxima distancia de detección es la longitud total del alimentador o la línea saliente más larga [8].

2.3. FALLAS EN REDES DE MEDIA TENSIÓN

El concepto de "falla" se refiere a una perturbación intencionada o no anticipada que interrumpe la operación habitual de uno o más elementos de un sistema eléctrico de potencia. Debido a sus particularidades, los sistemas de distribución pueden enfrentar fallas que se originan por diversas causas [9].

2.3.1. TIPOS DE FALLAS

Las fallas en redes de distribución se dividen por su duración en: fallas transitorias y permanentes. Las primeras se resuelven con la protección y permiten la reconexión

segura, causadas por rayos, contactos momentáneos, etc. Las segundas requieren acción humana, como choques con postes o actos vandálicos [10], citada en [11].

También es posible categorizarlas como fallas en serie y fallas shunt. Las fallas shunt ocurren cuando hay desequilibrios entre fases o entre fase y neutro. Por otro lado, las fallas en serie presentan un desequilibrio en las impedancias de línea y no incluyen la conexión a tierra ni la interacción entre fases. Dentro de las fallas shunt: se pueden tener aquellas que se conocen como “cortocircuitos” y también las denominadas “desbalances de carga” [12].

2.3.6. COSTO DE FALLA

El término "costo de falla" (CF) o "costo de energía no suministrada" (CENS) se emplea en la literatura global para describir y categorizar los impactos económicos que pueden repercutir en la sociedad en su totalidad cuando no se puede proporcionar electricidad de acuerdo con las necesidades de la demanda. [6]

Se empleó un método para calcular el costo de falla que representa al sistema eléctrico de Paraguay. Los resultados indican un costo mínimo de falla en el sistema de 13,190 Gs./kWh y un valor máximo de 18,328 Gs./kWh. [6].

2.3.7. PERDIDA POR ENERGÍA NO FACTURADA (PENF)

Es la pérdida económica causada por la energía que se deja de distribuir y por lo tanto de facturar, en la zona afectada por un corte del suministro, durante el tiempo del fuera de servicio [7]

2.4. CORTOCIRCUITO

El cortocircuito se origina por una anomalía en el sistema eléctrico, manifestándose en un circuito o instalación cuando se crea una vía de conexión entre dos o más puntos que poseen tensiones diferentes, reduciendo la diferencia de potencial entre ellos a niveles insignificantes o nulos. A raíz de este suceso, se establece una corriente de falla a través del sistema, la cual se denomina intensidad o corriente de cortocircuito [15].

2.4.1. TIPOS

Según [16] se pueden clasificar en dos grupos:

2.4.1.1. Simétricas (balanceadas)

Cuando en el momento del cortocircuito, la corriente en las tres fases del sistema son iguales:

a. Cortocircuito trifásico

Se presenta cuando las tres fases del sistema entran en contacto en un mismo punto. Este tipo de cortocircuito suele ser el más grave en la mayoría de las circunstancias.

b. Cortocircuito trifásico a tierra

Se presenta cuando las tres fases y tierra entran en contacto en un mismo punto (una situación poco común).

2.4.1.2. Asimétricas (desbalanceadas)

Cuando en el momento del cortocircuito, la corriente en las tres fases del sistema no son iguales:

a. Cortocircuito bifásico

Este tipo de fallo surge cuando dos fases cualesquiera del sistema entran en contacto.

b. Cortocircuito bifásico a tierra

En este caso, ocurre algo similar a la situación anterior, pero con la diferencia de que también hay conexión con el cable a tierra.

c. Cortocircuito monofásico

Este tipo de fallo se presenta cuando una fase cualquiera entra en contacto con el cable a tierra del sistema. Es la falla más común.

2.5. CYMDIST

CYMDIST es el paquete base para el análisis del sistema de distribución del software CYME. Agrupa todas las herramientas de modelado y análisis necesarias para realizar los diversos tipos de simulaciones involucradas en la planificación del sistema de distribución eléctrica [17].

2.5.1. MODELADO DE LOS ALIMENTADORES EN CYMDIST

El módulo adicional "Modelación detallada de subestaciones" en el software CYMDIST brinda al usuario la capacidad de modelar los elementos principales de cualquier subestación de distribución o subred. A través del editor gráfico de CYMDIST, es posible crear el diagrama unifilar de la subestación, lo cual abarca la representación de barras, alimentadores múltiples, transformadores de potencia, puntos de conexión y dispositivos de protección [12].

2.5.2. SIMULACIONES DE CORTOCIRCUITOS EN SOFTWARE CYMDIST

La simulación de cortocircuito resulta ser una herramienta analítica altamente beneficiosa para investigar inconvenientes en sistemas eléctricos. Esta herramienta calcula tanto las corrientes máximas como mínimas en cada tramo de la red durante una situación de fallo. Adicionalmente, es capaz de determinar el impacto de una falla individual (flujo de falla) en un nodo, línea o cable específico, a nivel de la red completa. [18].

2.6. TELEGRAM COMO HERRAMIENTA DE COMUNICACIÓN Y BUSQUEDA DE INFORMACION

Telegram es una aplicación de mensajería instantánea que permite enviar mensajes, imágenes, videos y archivos de manera gratuita. Destaca por su enfoque en la privacidad. Además, posibilita crear grupos de chat con hasta 200,000 miembros y canales de difusión. Está disponible en diversas plataformas y tiene una API abierta para desarrolladores. Telegram no tiene costos de suscripción y ofrece características adicionales más allá de la mensajería básica [19].

2.6.1. BOT DE TELEGRAM

Los bots automatizados son una de las funciones más valiosas de Telegram. Los bots son programas automatizados que pueden realizar una variedad de tareas, como buscar información en internet, crear recordatorios y mucho más [19].

Un bot es una aplicación que espera recibir solicitudes y las procesa en segundo plano para ofrecer resultados a los usuarios. En Telegram, un bot tiene funcionalidades similares a las de un usuario regular, pero con restricciones por motivos de seguridad o

diseño. Por ejemplo, puede interactuar con usuarios enviando y recibiendo mensajes, así como respondiendo a comandos [20].

2.6.2. PYTHON Y TELEGRAM

Los desarrolladores pueden utilizar la Telegram Bot API, una interfaz que les permite crear y gestionar bots en la plataforma Telegram. A través de esta API, pueden programar bots para realizar diversas tareas. Una vez creados, los bots pueden ser añadidos a grupos o conversaciones en Telegram, o incluso interactuar directamente con los usuario [19].

Existen varios lenguajes de programación que cuentan con múltiples librerías para interactuar con la API de bots de Telegram. Sin embargo, uno de los lenguajes más utilizados es Python, ya que ofrece una sencilla portabilidad de código, lo que permite alojarlo en cualquier sistema operativo [20].

3. METODOLOGÍA

3.1. DESCRIPCION DEL TRABAJO

El tipo de investigación para el proyecto final de grado se clasificó de la siguiente manera: En términos de su objetivo, se trató de una investigación de tipo aplicada, ya que se enfocó en la optimización de la función de búsqueda de fallas de los ETC con el fin de lograr un objetivo específico y preciso, que era la reducción del tiempo necesario para ubicar fallas en los alimentadores de la ES-COV, lo que, a su vez, mejoraría el desempeño de su operación.

En cuanto al tipo de datos utilizados, se llevó a cabo tanto una investigación cualitativa, mediante registros narrativos y entrevistas a Ingenieros y Técnicos de la ANDE, como una investigación cuantitativa, que se basó en el análisis de los registros históricos de fallas y su duración. Además, se utilizó una base de datos para obtener información cuantitativa adicional en el estudio de cortocircuito, que incluyó datos numéricos derivados de la simulación de cortocircuito en el sistema de alimentadores de media tensión.

Las técnicas de recolección de datos que se aplicaron incluyeron la recopilación documental, que permitió la obtención de datos bibliográficos a partir de documentos digitales que contenían registros de fallas en los alimentadores de la ES-COV, y la entrevista no estructurada, que facilitó la obtención de datos concretos y reales mediante conversaciones informales con técnicos especializados e ingenieros de la ANDE que trabajaban en el área de estudio de este proyecto de fin de grado.

3.2. RECOLECCIÓN DE DATOS

3.2.1. Entrevista

Se realizó una entrevista a los operadores del Departamento de Operación Regional Centro, quienes nos proporcionaron la siguiente información:

3.2.1.1. Implementación de los ETC

En lo que respecta a la empresa ANDE, bajo la dirección de la dependencia de redes inteligentes, a través de la LPI N° 1495, implementaron Equipos Telecomandados (ETC

de aquí en adelante) con el objetivo de desarrollar una mejora para poder obtener un sistema más confiable, eficiente y con una calidad de suministro eléctrico en aumento. Existen equipos telecomandados se encuentran ubicados en los alimentadores de la ES-COV de forma estratégica para seccionar el 33% de la carga de cada alimentador aproximadamente, esto para que en caso de que una falla deje fuera de servicio a un alimentador se pueda reponer el servicio en un menor tiempo.

Gracias a la función de búsqueda de fallas de estos equipos, cuando se presenta un fuera de servicio de un alimentador a causa de fallas los operadores pueden visualizar en el SCADA el tipo de falla y su valor, también la distancia al punto de falla desde el equipo.

3.2.1.2. Búsqueda de Fallas

El procedimiento para reposición de un alimentador de 23 kV es el siguiente:

Cuando ocurre un fuera de servicio a un alimentador ante un determinado evento, el operador de la estación deberá comunicarlo al centro de Operaciones de Distribución Regional Centro. A partir de esta comunicación, se aguarda un tiempo prudencial de cinco minutos para intentar el cierre del equipo de protección de salida del alimentador, esto si no se cuenta con alguna incidencia ya reportada sobre dicho alimentador. En caso de proceder al intento de cierre del equipo de protección de cabecera se pueden presentar dos posibilidades:

- Que la falla haya sido transitoria y se restablezca el servicio del alimentador.
- Que la falla persista y el alimentador vuelva a quedar fuera de servicio:

Sin ETC: En este caso se asigna a la cuadrilla de distribución más cercana para recorrer dicho alimentador, se verifica primeramente si la falla no se encuentra en la salida del alimentador, se realiza la apertura del seccionador cuchilla más cercano a la estación y se solicita al operador de la estación el cierre del alimentador, si se descarta que la falla se encuentre en ese tramo, la cuadrilla debe de recorrer el alimentador hasta el punto de seccionamiento del alimentador, de ahí se realiza apertura del seccionador de ese tramo y el cierre del anterior punto de seccionamiento que había quedado abierto, si el alimentador queda fuera de servicio, es porque en ese tramo se encuentra la falla, en caso contrario se deberá realizar este procedimiento por tramos de seccionamiento hasta encontrar la falla.

Con ETC: Si el cierre no fue satisfactorio, se procede a seccionar la línea, a partir del ETC abierto lado fuente hasta ubicar la falla.

A partir de la mitad del año 2022 se comenzó a implementar la localización de fallas por medio de los ETC, estos equipos cuando se da una falla especifican el tipo de falla y el valor del cortocircuito y se puede visualizar en el panel del equipo y también en el SCADA.



Figura 1 Visualización de datos del ETC desde el panel SCADA



Figura 2 Visualización de las corrientes de cortocircuito y distancia a falla del ETC

Entonces cuando existe una falla el operador realiza una simulación de cortocircuito del alimentador afectado en el software CYMDIST, luego compara en que nodo coincide el tipo y valor de falla que indica el ETC, cuando se encuentra una coincidencia se rescatan las coordenadas de ese nodo y luego se ingresa al buscador de Google Maps, y finalmente se envía la posible ubicación de la falla a la cuadrilla para la correspondiente búsqueda y reposición del servicio.

Aunque la implementación de estos equipos tele comandados redujeron la zona de búsqueda de fallas, aún no se aprovecha de forma completa. Pues en algunas ocasiones a causa del tedioso proceso descrito arriba se vuelve a recurrir a la búsqueda de fallas por tramos de seccionamiento.

3.2.1.3. Herramienta de búsqueda de equipos que utilizan actualmente

Actualmente gracias a la utilización de la herramienta CIMAD (un BOT de Telegram para consultas inteligentes del sistema de distribución), pueden ubicar los dispositivos instalados en la red de distribución con mayor facilidad. Al ingresar el número del dispositivo, el BOT les devuelve un enlace de ubicación de Google Maps con la georreferenciación del equipo.

3.2.1.4. Conclusiones y recomendaciones de la entrevista

Con base en los datos recopilados, se planteó la opción de simplificar el procedimiento de búsqueda del punto de falla optimizando el proceso de simulación y búsqueda de coordenadas de dicho punto. Todo lo anterior combinado con una herramienta a la que ya están acostumbrados a utilizar, es decir utilizando un BOT de Telegram.

3.2.2. Consulta a base de datos

Se solicitó al Departamento de Operación de Distribución Regional Centro los diagramas unifilares de los alimentadores en estudio de su base de datos del CYMDIST, con el flujo de carga actualizado, lo cual es necesario para obtener resultados lo más precisos posible.

En esta base de datos se encuentran representados 11 alimentadores de la ES-COV: COV1, COV2, COV3, COV5, COV6, COV7, COV8, COV9, COV10, COV12 y COV14, junto con sus respectivos dispositivos. Además, en esta base de datos se definen los nodos según las conexiones físicas, los puntos de conexión de carga y los puntos de conexión de dispositivos específicos para el control y la medición.

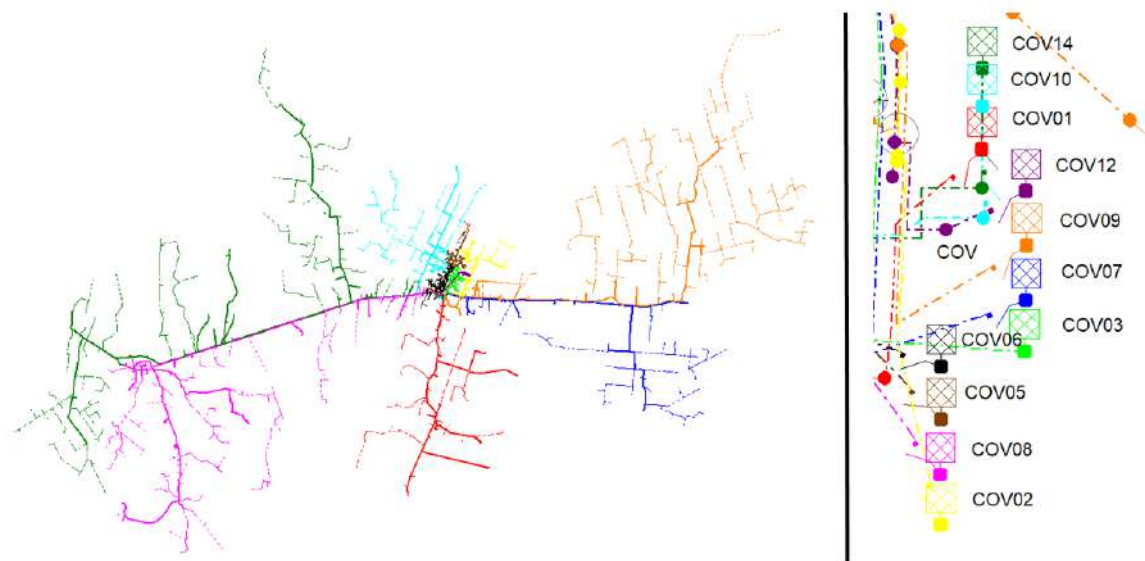


Figura 3 Esquema de alimentadores de la ES-COV.

3.3. GENERACIÓN Y GESTIÓN DE BASE DE DATOS

Gracias a la información y los datos previamente adquiridos, se obtuvo un panorama más claro de la herramienta que se utilizará para optimizar el proceso de búsqueda de fallas, así como de las variables que se tendrán en cuenta.

Crearemos una base de datos con las variables que se dan y que podemos visualizar en los ETC cuando ocurre un fuera de servicio (alimentador, tipo de falla, valor de cortocircuito)

3.3.1. Simulación de cortocircuito

Para generar la base de datos que utilizará el BOT se realizó una simulación de cortocircuito en el software CYMDIST versión 7.1.

Se utilizó el método convencional de cálculo de las corrientes de cortocircuito, que según [18], en el cálculo de cortocircuito convencional no sigue las recomendaciones de ninguna norma particular y se basa en los siguientes postulados:

- La tensión de pre-falla a ser considerada se define por el usuario entre las opciones de usar la tensión nominal, la tensión de servicio o la tensión obtenida de la resolución de un flujo de carga.
- La inclusión de la contribución procedente de los motores y generadores es opcional, salvo la de los generadores de fuente y “swing” que se incluyen automáticamente.
- El usuario puede escoger utilizar las impedancias subtransitorias, transitorias o de régimen permanente para calcular la corriente de falla.

Con este método que se seleccionó se calcularon los valores de los tipos de cortocircuito que se pueden presentar en cada nodo a lo largo de la extensión de los alimentadores en estudio. Las fórmulas que utiliza el software para el cálculo de cortocircuito según este método se encuentran en el ANEXO I

La simulación fue realizada según el método convencional seleccionando **Análisis > Análisis de fallas > Cortocircuito**

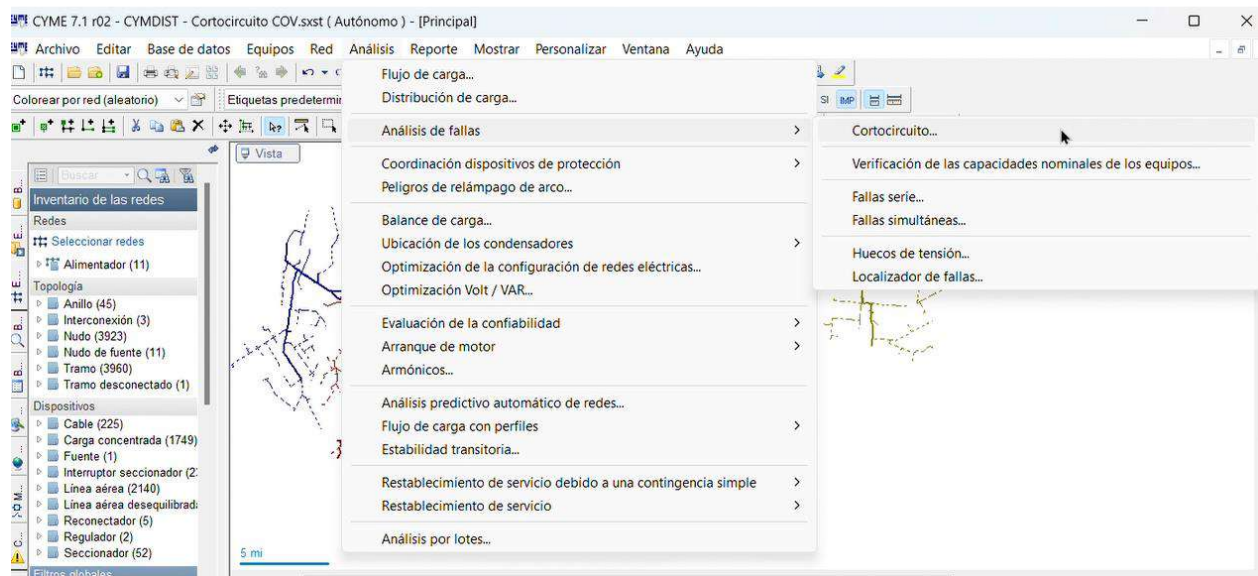


Figura 4 Software CYMDIST

Y en el “Modo de Cálculo” fue seleccionada la opción de “Niveles de cortocircuito en todos los nudos y Barras”. Esto para tener una mayor cobertura de los posibles puntos de falla que necesitaremos ubicar, al analizar todos los nodos se obtuvo una mayor cobertura lo que permitirá comparar los valores de falla y determinar el nodo de coincidencia de manera más efectiva.

Luego en la sección de impedancias de falla, se configuró a la Z_g (impedancia de falla a tierra) = 13,333 ohmios², esto para simular una condición de falla máxima. Se condicionó la simulación de esta forma para poder descartar los tramos aguas abajo del nodo de coincidencia.

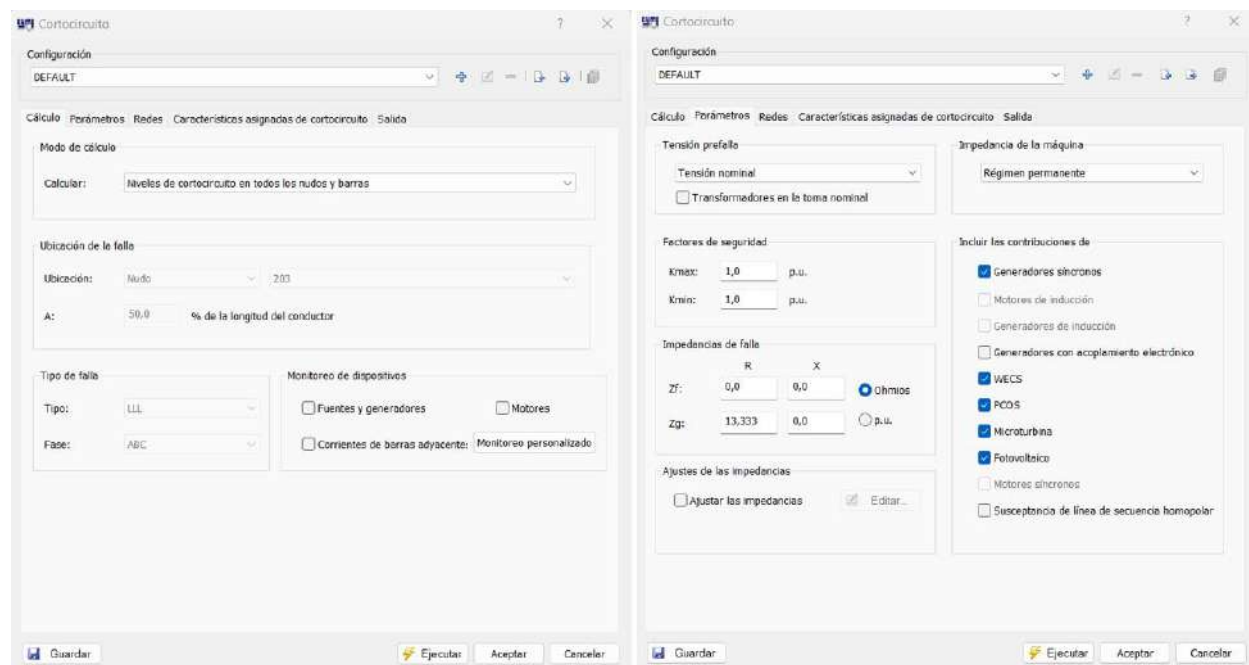


Figura 5 Configuración para simulación en el software CYMDIST

Los datos obtenidos con la simulación se guardaron en una hoja de cálculo (opción que nos ofrece el software para guardar los resultados) obteniéndose los valores de los tipos de cortocircuito que se da en los nodos definidos en los tramos de los alimentadores en estudio. También rescatamos las coordenadas de ubicación de cada nodo que servirá para la geolocalización de las fallas.

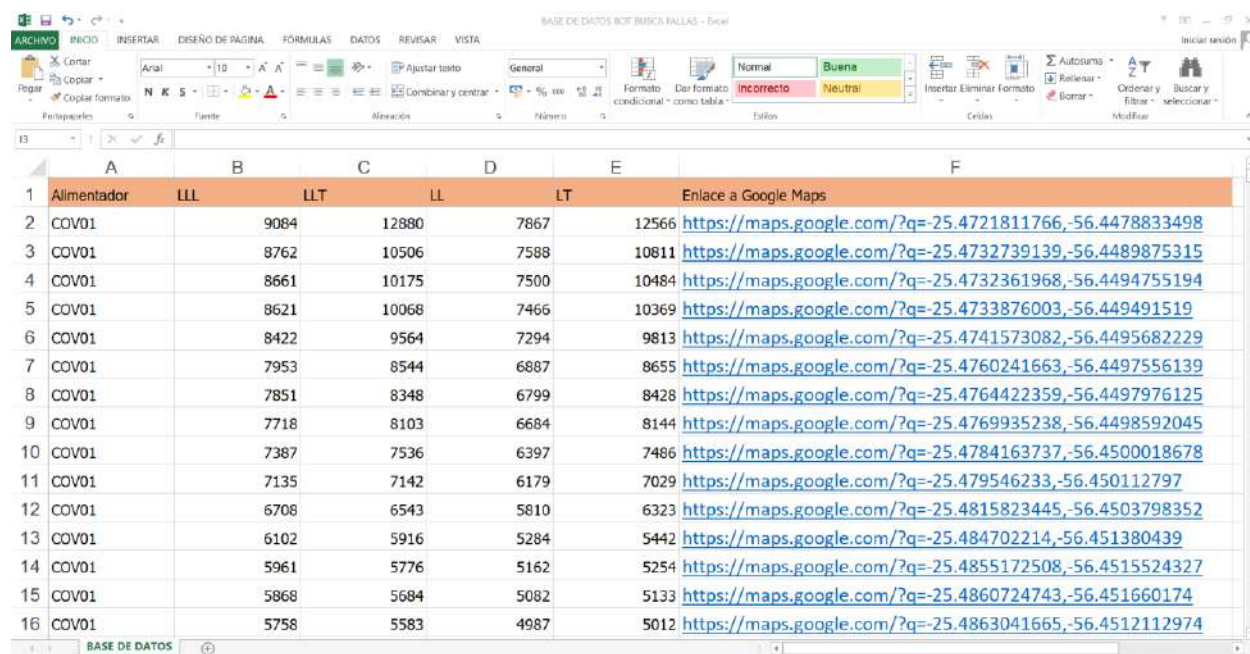
	A	B	C	D	E	F	G	H	I
1	Alimentador	Nodo	LLL	LLT	LL	LT	Distancia total (km)	Latitud	Longitud
2	COV01	NODOI_1_COV01	9084	12880	7867	12566	0.000000	-25.4721812	-56.4478833
3	COV01	NODOI_18_COV01	8762	10506	7588	10811	0.226773	-25.4732739	-56.4489875
4	COV01	NODOI_130_COV01	8661	10175	7500	10484	0.276005	-25.4732362	-56.4494755
5	COV01	NODOI_32_COV01	8621	10068	7466	10369	0.292848	-25.4733876	-56.4494915
6	COV01	NODOI_72_COV01	8422	9564	7294	9813	0.378433	-25.4741573	-56.4495682
7	COV01	NODOI_252_COV01	7953	8544	6887	8655	0.586026	-25.4760242	-56.4497556

Figura 6 Datos obtenidos de la simulación.

² Valor utilizado por la ANDE DD/DOM como valor mínimo de impedancia de cortocircuito

En la imagen, podemos observar los datos que se obtuvieron y guardaron de la simulación de cada tipo de cortocircuito que se realizó sobre cada nodo correspondiente a cada uno de los alimentadores. Esta base de datos conserva la información de los alimentadores junto con los valores de los tipos de cortocircuito correspondientes (LLL: cortocircuito trifásico; LLT: cortocircuito bifásico a tierra; LL: cortocircuito bifásico; LT: cortocircuito monofásico a tierra).

Además, se convirtió las coordenadas de latitud y longitud en enlaces a Google Maps utilizando la función HYPERLINK de Excel. Estos enlaces nos permiten acceder rápidamente a la ubicación en Google Maps. La fórmula utiliza la URL base de Google Maps, 'https://www.google.com/maps?q=', como punto de partida, y luego concatena los valores de latitud y longitud. Esto generó un enlace que, al hacer clic, redirige al usuario a la ubicación correspondiente en Google Maps en su navegador web, facilitando la visualización de las ubicaciones geográficas en el mapa de los valores de cada una de las fallas. En la base de datos, se conservaron estos enlaces para acceder a la información de ubicación de manera eficiente.



	A	B	C	D	E	F
	Alimentador	LLL	LLT	LL	LT	Enlace a Google Maps
2	COV01		9084	12880	7867	12566 https://maps.google.com/?q=-25.4721811766,-56.4478833498
3	COV01		8762	10506	7588	10811 https://maps.google.com/?q=-25.4732739139,-56.4489875315
4	COV01		8661	10175	7500	10484 https://maps.google.com/?q=-25.4732361968,-56.4494755194
5	COV01		8621	10068	7466	10369 https://maps.google.com/?q=-25.4733876003,-56.449491519
6	COV01		8422	9564	7294	9813 https://maps.google.com/?q=-25.4741573082,-56.4495682229
7	COV01		7953	8544	6887	8655 https://maps.google.com/?q=-25.4760241663,-56.4497556139
8	COV01		7851	8348	6799	8428 https://maps.google.com/?q=-25.4764422359,-56.4497976125
9	COV01		7718	8103	6684	8144 https://maps.google.com/?q=-25.4769935238,-56.4498592045
10	COV01		7387	7536	6397	7486 https://maps.google.com/?q=-25.4784163737,-56.4500018678
11	COV01		7135	7142	6179	7029 https://maps.google.com/?q=-25.479546233,-56.450112797
12	COV01		6708	6543	5810	6323 https://maps.google.com/?q=-25.4815823445,-56.4503798352
13	COV01		6102	5916	5284	5442 https://maps.google.com/?q=-25.484702214,-56.451380439
14	COV01		5961	5776	5162	5254 https://maps.google.com/?q=-25.4855172508,-56.4515524327
15	COV01		5868	5684	5082	5133 https://maps.google.com/?q=-25.4860724743,-56.451660174
16	COV01		5758	5583	4987	5012 https://maps.google.com/?q=-25.4863041665,-56.4512112974

Figura 7 Base de datos con enlace a Google Maps.

Esta base de datos es la utilizada para la programación del BOT, donde la base de Datos creada se encuentra en el ANEXO II

3.4. DESARROLLO DEL BOT

3.4.1. Creación del Bot

Para la creación del bot, se utilizó la aplicación de Telegram. Esto se debió a que, según la entrevista realizada, en el Departamento de Operación Regional Centro ya se contaba con un bot llamado CIMAD (un bot de Telegram para consultas inteligentes del sistema de distribución). Por lo tanto, se aprovechó que ya se tenía un conocimiento previo y práctica en la utilización del bot en dicha App. Además, Telegram nos ofrece una interacción sencilla y versátil, lo que permite automatizar tareas, tener acceso inmediato a información valiosa, son rentables, seguros, pueden funcionar las 24 horas y cabe resaltar ofrece una versión gratuita a la cual podemos acceder desde varios dispositivos (celulares, tablets y computadoras).

Se realizó una solicitud al BotFather, que es el bot utilizado en Telegram para crear y administrar nuevas cuentas de Bots. Luego se nombró al Bot como “Busca Fallas ES-COV” se generó un TOKEN, que es una clave de acceso que permite que el Bot se comunique y acceda a la API de Telegram para enviar y recibir mensajes.

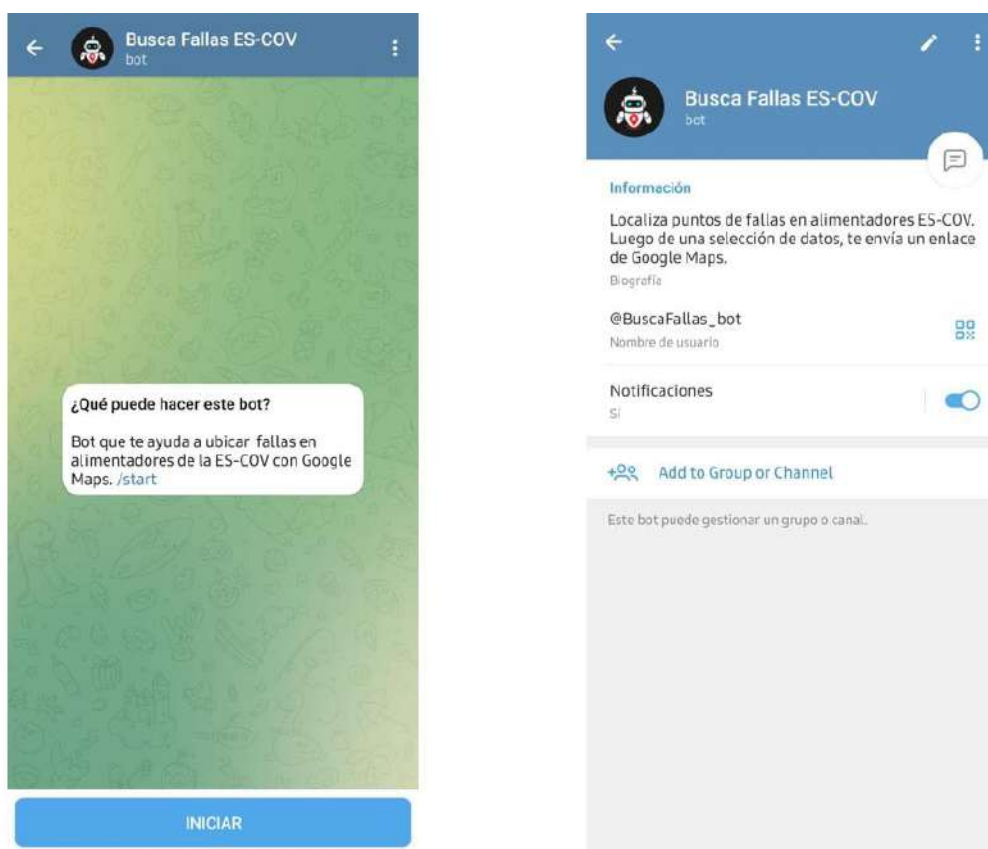


Figura 8 Busca Fallas ES-COV (Bot).

3.4.2. Generación del código en Python

Para la generación del código, se utilizó el lenguaje de programación Python en su versión 3.11. Elegimos este lenguaje debido a su facilidad de aprendizaje, gracias a sus bibliotecas específicas y a su comunidad activa, convirtiéndolo en una opción ideal para principiantes que desean programar bots de Telegram.

3.4.3. Diseño del BOT

Se diseñó el bot basado en el proceso de búsqueda que necesitamos optimizar, este bot tendrá acceso a la base de datos que se creó a partir de la simulación de cortocircuito en el sistema CYMDIST. Con esto, se aceleró el proceso de búsqueda del punto de falla, filtrando los datos de acuerdo a la información que nos ofrecen los equipos telecomandados cuando ocurre un fuera de servicio debido a fallas.

El proceso del Bot que se diseñó para Telegram sigue los siguientes pasos:

Paso 1: iniciar el proceso del bot

Paso 2: solicitar al usuario selección de alimentador

Paso 3: solicitar al usuario selección de tipo de falla

Paso 4: solicitar al usuario ingresar el valor de la falla

Paso 5: Enviar la ubicación que coincida con los criterios seleccionados

El código completo se encuentra en el ANEXO III.

3.4.4. Visualización del proceso que realiza el BOT

El Proceso de utilización de nuestro Bot es el siguiente:



Figura 9 Paso 1/ Proceso del Bot.

Con el comando “/start” se da inicio al proceso del bot

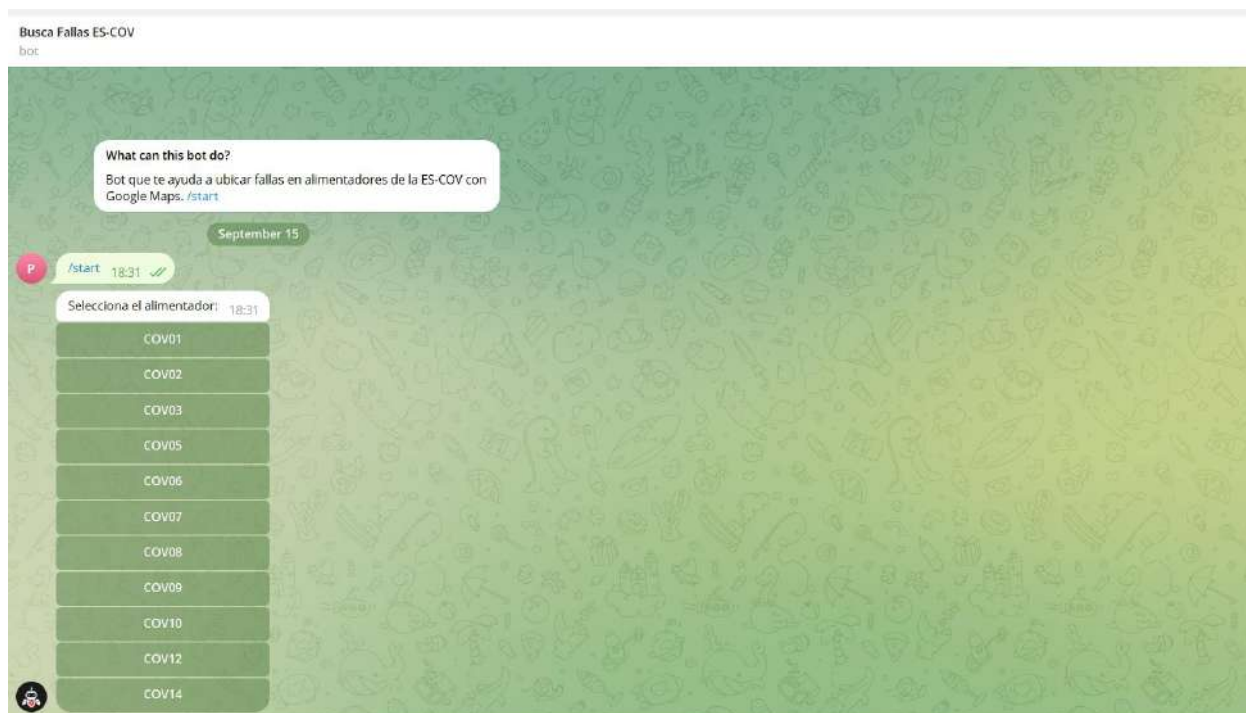


Figura 10 Paso 2/ Proceso del Bot.

Luego se solicita la selección del alimentador, se selecciona el alimentador que se encuentra fuera de servicio

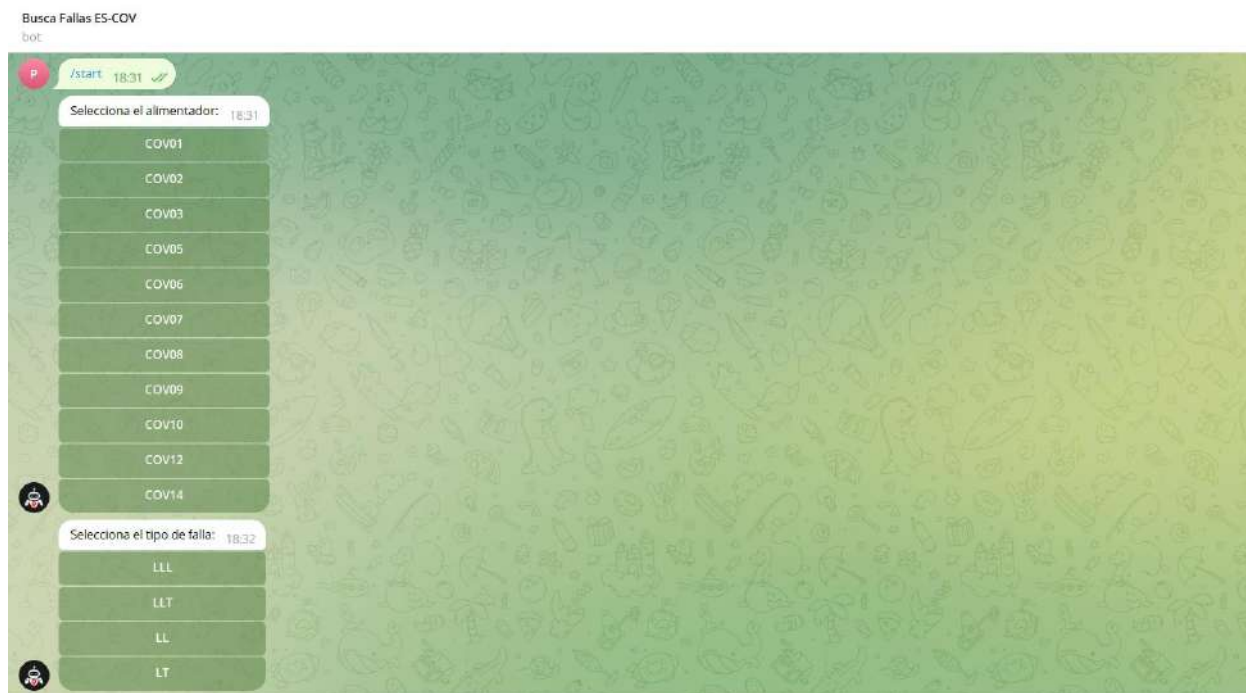


Figura 11 Paso 3/ Proceso del Bot.

Luego se solicita la selección del tipo de falla

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

Ada Luján Paniagua Giménez - 2023

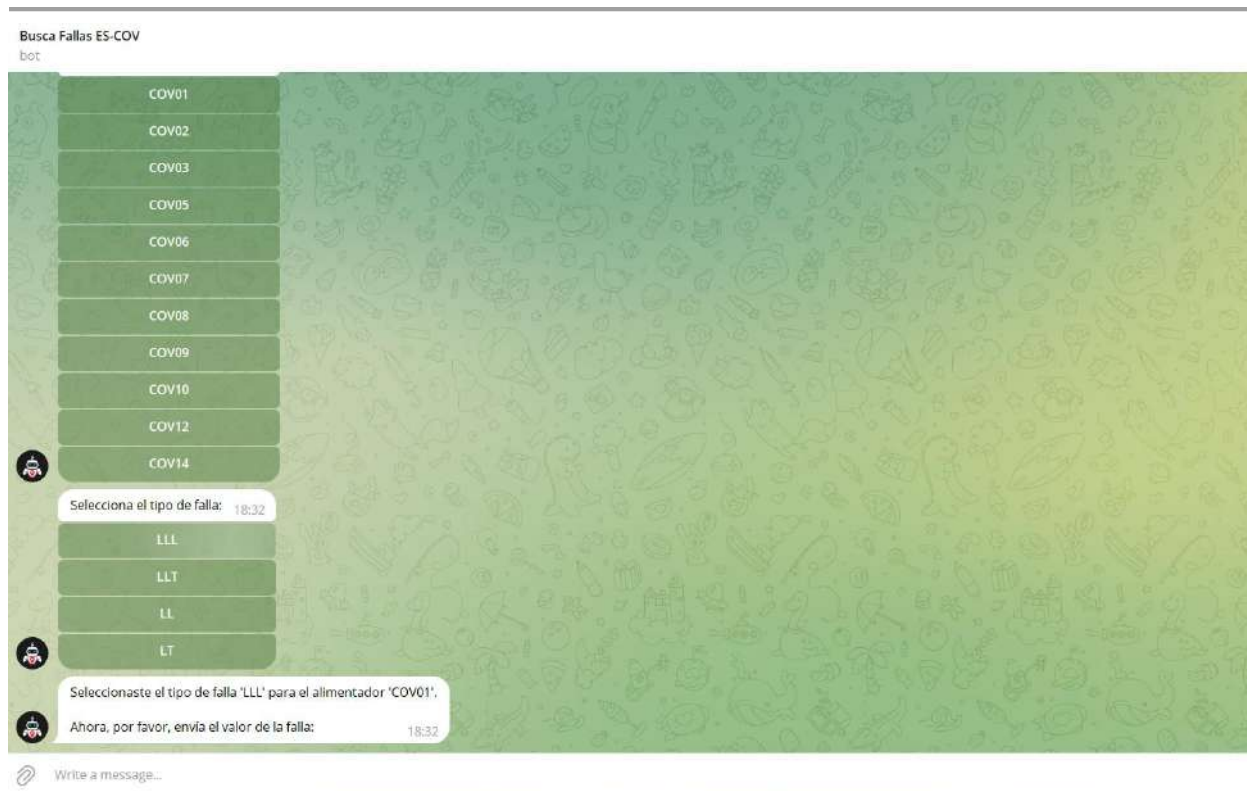


Figura 12 Paso 4/ Proceso del Bot.

Se solicita que se ingrese el valor de la falla

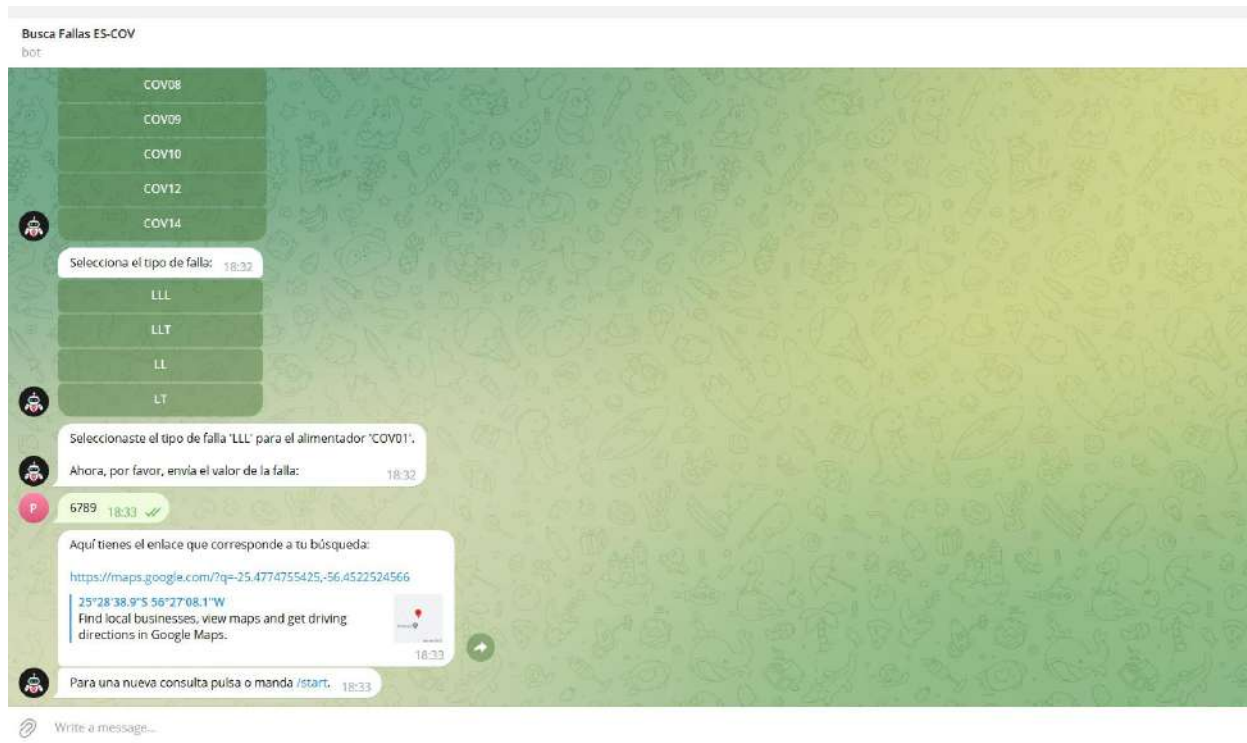


Figura 13 Paso 5/ Proceso del Bot.

Aquí, dependiendo del valor ingresado, el bot nos enviará una ubicación. Esta ubicación representa un nodo que se encuentra a lo largo del trayecto de los alimentadores de la ES-COV y fue definida en la base de datos del CYMDIST de la ANDE.

Luego de esto, el operador puede enviar a la cuadrilla a verificar el alimentador desde dicho punto aguas arriba para localizar el punto de falla y poder restablecer el servicio de dicho alimentador.

4. RESULTADOS Y ANÁLISIS

En este trabajo se creó una herramienta que será de utilidad para optimizar el proceso de búsqueda de fallas que se realiza a través de dicha función de los ETC. Esta herramienta consiste en un Bot de Telegram "@Buscafallas_bot" que solicita al usuario una selección de alimentador y tipo de falla. Luego, solicita que se ingrese el valor de la falla y envía al usuario un enlace con una ubicación en Google Maps. A partir de dicha ubicación, aguas arriba, la cuadrilla comenzará su búsqueda del punto de falla.

Análisis:

Como mencionamos anteriormente, el Bot nos envía un enlace de ubicación de Google Maps, lo que consideraremos como punto de partida aguas arriba para la búsqueda de fallas. Se considera como punto de partida porque existen dos casos que se presentan cuando se filtran los datos en la Base de Datos que generamos. Los dos casos mencionados son cuando el valor de la falla enviado coincide con el valor de la base de datos y cuando no coinciden los valores. A continuación, detallaremos ambos casos.

4.1. Cuando los valores coinciden:

4.1.1. Que un solo valor coincida

Cuando en la base de datos filtrada el bot solo encuentre una coincidencia



Alimentador	LLT	Enlace a maps
COV02	8512	https://maps.google.com/?q=-25.46837427,-56.4489883911
COV02	8224	https://maps.google.com/?q=-25.467718901
COV02	8094	https://maps.google.com/?q=-25.467395300
COV02	8069	https://maps.google.com/?q=-25.467392471
COV02	7457	https://maps.google.com/?q=-25.466056952
COV02	7407	https://maps.google.com/?q=-25.466121077
COV02	7217	https://maps.google.com/?q=-25.466380131
COV02	6837	https://maps.google.com/?q=-25.467054017
COV02	6817	https://maps.google.com/?q=-25.466974998
COV02	6658	https://maps.google.com/?q=-25.467429447
COV02	6581	https://maps.google.com/?q=-25.467121221
COV02	6452	https://maps.google.com/?q=-25.466559366
COV02	6263	https://maps.google.com/?q=-25.465947656
COV02	6611	https://maps.google.com/?q=-25.467532621
COV02	5848	https://maps.google.com/?q=-25.469466421
COV02	5716	https://maps.google.com/?q=-25.470168896
COV02	5780	https://maps.google.com/?q=-25.468796882
COV02	5749	https://maps.google.com/?q=-25.468950006

Figura 14 Una coincidencia reflejada en el Bot y la Base de datos.

4.1.2. Que más de un valor coincida

Se puede dar el caso por la similitud de las derivaciones de las líneas que en algunos nodos se tengan en el resultado de la simulación los mismos valores de cortocircuito. En nuestra base de datos podemos encontrar algunas coincidencias, que dividiremos en 2 casos:

4.1.2.1. Que las ubicaciones se encuentren bajo el mismo ETC



The image shows a WhatsApp chat interface on the left and a table of data on the right. The chat is with a bot named 'Busca Fallas ES-COV'. The bot has sent a message asking for the fault value for a specific feeder ('LLL' for 'COV08'). The user has responded with '855'. The bot has then sent a message with Google Maps links and coordinates for the location.

The table on the right lists the data for the 'Alimentador LLL' and provides a link to Google Maps for each entry. The table has two columns: 'Alimentador LLL' and 'Enlace a Google Maps'.

Alimentador LLL	Enlace a Google Maps
COV08 855	https://maps.google.com/?q=-25.5305256619,-56.7390520876
COV08 855	https://maps.google.com/?q=-25.5306758678,-56.7392898791
COV08 849	https://maps.google.com/?q=-25.529969437,-56.740327
COV08 0	https://maps.google.com/?q=-25.5270107167,-56.74069
COV08 0	https://maps.google.com/?q=-25.5220816302,-56.7404
COV08 848	https://maps.google.com/?q=-25.5324235067,-56.7390
COV08 843	https://maps.google.com/?q=-25.5329524848,-56.7380
COV08 839	https://maps.google.com/?q=-25.5338687017,-56.7379
COV08 832	https://maps.google.com/?q=-25.5337488057,-56.7359
COV08 826	https://maps.google.com/?q=-25.5336147655,-56.7339
COV08 824	https://maps.google.com/?q=-25.533242583,-56.7339
COV08 821	https://maps.google.com/?q=-25.5335255641,-56.7323
COV08 814	https://maps.google.com/?q=-25.531748476,-56.7323
COV08 812	https://maps.google.com/?q=-25.5310259138,-56.7323
COV08 810	https://maps.google.com/?q=-25.5303509574,-56.7323
COV08 804	https://maps.google.com/?q=-25.5291632841,-56.7318
COV08 800	https://maps.google.com/?q=-25.5290769866,-56.7310
COV08 790	https://maps.google.com/?q=-25.5288602095,-56.7288
COV08 790	https://maps.google.com/?q=-25.5303414228,-56.7303

Figura 15 Dos coincidencias reflejadas en el Bot y la Base de datos.

Uno de estos casos es el que podemos observar en el alimentador COV08, para el tipo de falla LLL de valor 855 A.

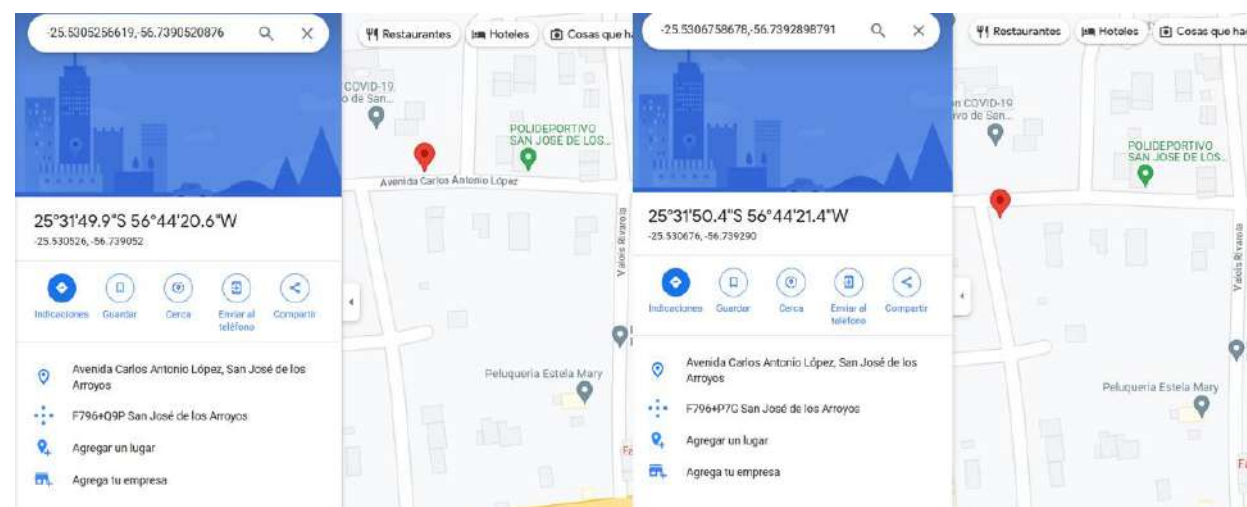


Figura 16 Dos coincidencias reflejadas en el Google Maps.

Como podemos observar ambas ubicaciones se encuentran muy cercanas y ambas se encuentran bajo el mismo ETC. Si se da el caso de que se encuentren alejadas pero bajo el mismo ETC limitaríamos la búsqueda a esas 2 ubicaciones.

4.1.2.2. Que las ubicaciones se encuentren bajo distintos ETC.

Busca Fallas ES-COV bot

Seleccionaste el tipo de falla 'LLL' para el alimentador 'COV08':

Ahora, por favor, envía el valor de la falla:

800

Aquí tienes los enlaces correspondientes a tu búsqueda:

<https://maps.google.com/?q=-25.5545343083,-56.7130624777>

<https://maps.google.com/?q=-25.5290769866,-56.731014003>

25°33'16.3"S 56°42'47.0"W

Find local businesses, view maps and get driving directions in Google Maps.

Para una nueva consulta pulsa o manda /start.

	A	B	F
1	Alimentador	LLL	Enlace a Google Maps
265	COV08	800	https://maps.google.com/?q=-25.5545343083,-56.7130624777
266	COV08	795	https://maps.google.com/?q=-25.5552948789,-56.7130825091
267	COV08	792	https://maps.google.com/?q=-25.5558977674,-56.7130440994
268	COV08	768	https://maps.google.com/?q=-25.5603217913,-56.7123882091
269	COV08	0	https://maps.google.com/?q=-25.5616451894,-56.7292784871
270	COV08	751	https://maps.google.com/?q=-25.5636439392,-56.7111355731
271	COV08	0	https://maps.google.com/?q=-25.5604844069,-56.7072560527
272	COV08	724	https://maps.google.com/?q=-25.5688866795,-56.7092781984
273	COV08	0	https://maps.google.com/?q=-25.5631950887,-56.7043869823
274	COV08	701	https://maps.google.com/?q=-25.5738768032,-56.7074967516
275	COV08	690	https://maps.google.com/?q=-25.5761429619,-56.7066876999

	A	B	F
1	Alimentador	LLL	Enlace a Google Maps
490	COV08	800	https://maps.google.com/?q=-25.5290769866,-56.731014003
491	COV08	790	https://maps.google.com/?q=-25.5288602095,-56.7288851262
492	COV08	790	https://maps.google.com/?q=-25.5303414228,-56.7303702928
493	COV08	789	https://maps.google.com/?q=-25.5303363436,-56.7302328996
494	COV08	783	https://maps.google.com/?q=-25.530247538,-56.7289801709
495	COV08	786	https://maps.google.com/?q=-25.5310014345,-56.7302119065
496	COV08	785	https://maps.google.com/?q=-25.5309983174,-56.7300875324
497	COV08	804	https://maps.google.com/?q=-25.5304071707,-56.733487616
498	COV08	0	https://maps.google.com/?q=-25.5306191607,-56.7334933227
499	COV08	798	https://maps.google.com/?q=-25.5304816466,-56.7346405655

Figura 17 Dos coincidencias reflejadas en el Bot y la Base de datos.

Un ejemplo de este caso sería para el alimentador COV08, para el tipo de falla LLL de valor 800 A.

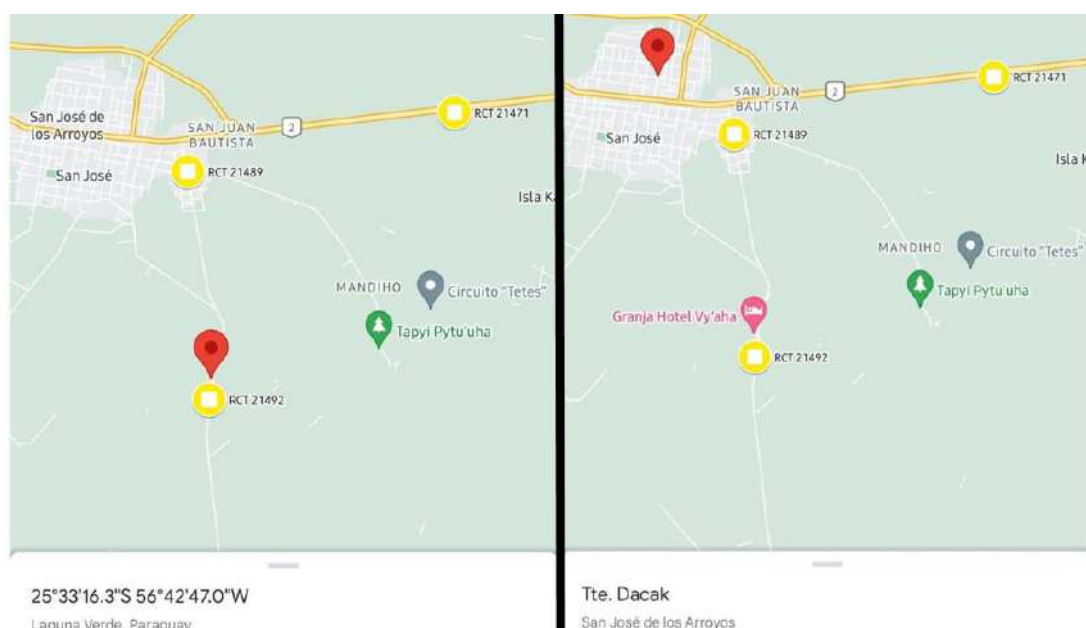


Figura 18 Dos coincidencias reflejadas en el Google Maps.

Como podemos observar aquí podemos descartar una de las ubicaciones dependiendo del ETC.

4.2. Cuando los valores no coinciden

4.2.1. Que el valor se encuentre entre 2 nodos

Que el valor se encuentre entre dos nodos, entonces se enviará la ubicación del nodo más alejado de la fuente, es decir la coincidencia del menor valor inmediato.

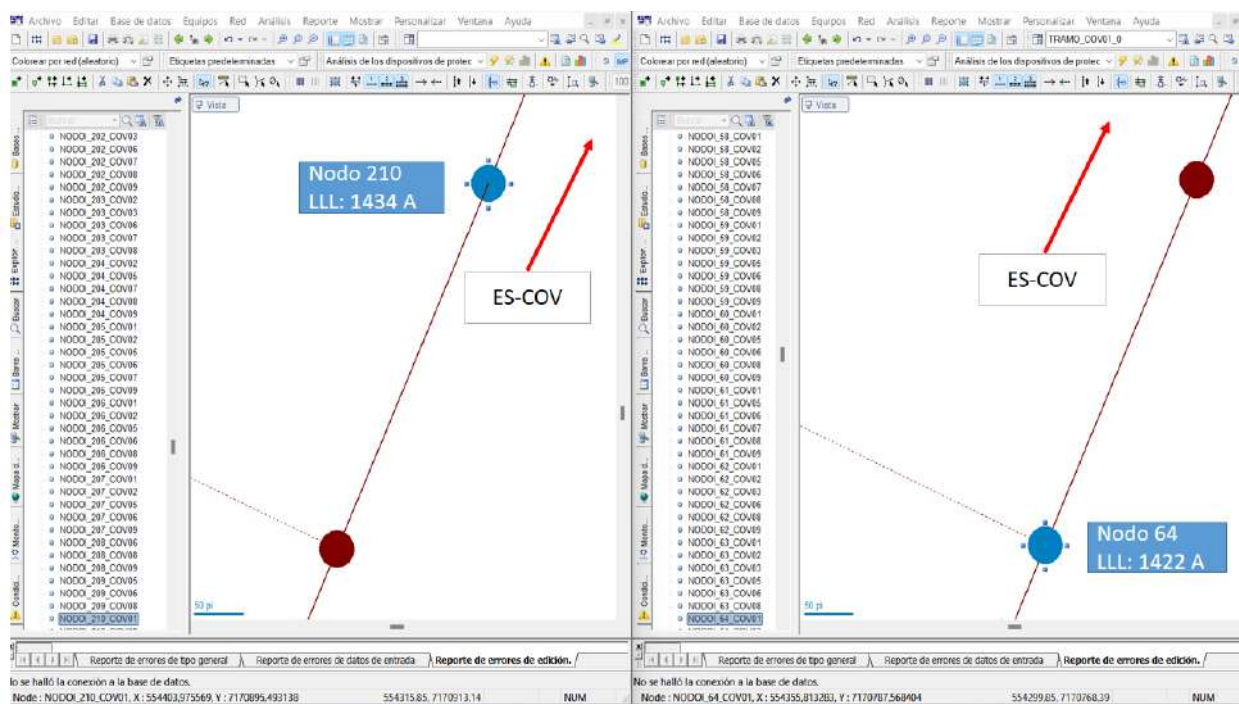


Figura 19 Nodos continuos de un tramo del alimentador COV01.

En esta imagen, podemos observar que para el nodo 210 (marcado en azul en el lado izquierdo), el valor de una falla de tipo LLL es de 1434 A, mientras que para el nodo 64 (marcado en azul en el lado derecho), el valor de una falla LLL es de 1422 A. Si el usuario ingresa un valor de 1430 A, se le enviará la ubicación del nodo de menor valor más cercano, en este caso, el nodo 64. De esta manera, la cuadrilla podrá localizar la falla aguas arriba de esa ubicación. Esto se aplicará a todos los valores que no coincidan pero estén dentro de los valores de nuestra base de datos.

En este punto, podemos definir la razón por la cual se enviará a la cuadrilla aguas arriba de la ubicación que se obtiene. Esto se debe a que el valor del cortocircuito disminuye a medida que nos alejamos de la fuente, debido a la impedancia propia de la línea y las ramificaciones en el trayecto del alimentador. Esto se puede comprobar con los resultados que obtuvimos de la simulación y que se encuentran en nuestra base de datos.

4.2.2. Que los valores no se encuentren entre los límites de nuestra base de datos filtrada.

Si el valor ingresado por el usuario resulta ser mayor que el valor máximo en nuestra base de datos filtrada o menor que el valor mínimo en nuestra base de datos filtrada, el Bot enviará un mensaje de error.

Optamos por no utilizar ningún rango de tolerancia, ya que no existen estudios o normas que especifiquen un porcentaje de variación de valores de cortocircuito. Las normas IEEE C37.010 y IEC 60909 respaldan la idea de considerar tolerancias en la detección de fallas al reconocer la variabilidad en los sistemas eléctricos de distribución y los valores que se pueden obtener de las simulaciones y cálculos asociados.

Por lo mencionado, el mensaje de error incluirá el límite inferior o superior como dato, lo que permitirá su uso en la toma de decisiones si es necesario.



Figura 20 Respuesta del BOT para valores fuera del rango de la Base de datos

CONCLUSIONES Y RECOMENDACIONES

Con este trabajo se logró recolectar datos de alimentadores de la ES-COV, se obtuvo los esquemas de los alimentadores y también sus datos de fallas desde el 2017 en adelante, visualizando que los alimentadores que suelen presentar un mayor tiempo para la reposición de servicio ante fallas son aquellos que poseen una longitud ponderante, así también estos alimentan zonas alejadas de la ciudad (zonas rurales) como el COV7 y el COV8.

Gracias a la entrevista que se realizó se obtuvo información sobre el procedimiento que se realiza para la reposición del servicio de un alimentador en caso de fallas, con y sin ETC, y del proceso que realizan a través de dichos equipos para la ubicación del punto de falla.

Con los datos obtenidos se realizó la simulación de cortocircuito de los alimentadores en estudio con el Software CYMDIST, de esta simulación obtuvimos los valores de cortocircuito trifásico (LLL), bifásico a tierra (LLT), bifásico (LL) y monofásico a tierra (LT) de los nodos de finidos en los tramos de los mismos, además también rescatamos las coordenadas de ubicación de dichos nodos.

A partir de los datos obtenidos de la simulación se generó la base de datos que utilizamos para la implementación de la optimización, para dicha base de datos se generó enlaces a Google Maps con las coordenadas de ubicación de los nodos de los tramos de los alimentadores en estudio.

Se programó un bot de Telegram que realiza el proceso de búsqueda del punto de falla de manera simplificada, pues, con una simple selección de alimentador y tipo de falla se puede ingresar el valor de la falla para obtener su posible ubicación, ubicación a partir de la cual aguas arriba se mandará a la cuadrilla para la búsqueda del punto de falla y reposición del servicio del alimentador.

Con esta optimización es posible lograr la reducción del tiempo de búsqueda de fallas de los alimentadores de la ES-COV, logrando también una posible reducción del costo de falla para la sociedad, y de la pérdida por energía no facturada para la ANDE.

Para que el Bot pueda tener un buen desempeño en el futuro se recomienda:

- Realizar un estudio para saber con qué frecuencia se debe actualizar la base de datos.
- Alojarse nuestro código en un servidor en la nube y configurar el proceso de ejecución continua en dicho servidor. Existen servidores que ofrecen opciones

gratuitas, pero suelen tener limitaciones en términos de recursos y tiempo de actividad, por lo que si vamos a requerir una disponibilidad constante se tiene que considerar opciones de pago.

- Mejorar la política de información entre la Estación y el Centro de Control en caso de los interruptores de cabecera.
- Realizar un estudio para analizar la posibilidad de incluir como extensión del código la utilización del dato de distancia a la falla que también ofrecen los ETC.

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ANEXOS

ANEXO I FORMULAS PARA EL CALCULO DE CORTOCIRCUITO

Según CYME – Guía del Usuario – Análisis básicos de CYMDIST

Suposiciones de cálculo:

- El usuario define la tensión de prefalla que se considerará en el cálculo entre las opciones: tensión nominal, tensión de servicio y tensión obtenida a partir de un análisis de un flujo de carga.
- Los motores se consideran ser fuentes de inyección de corriente en serie con las impedancias (transitoria, subtransitoria o en régimen permanente) seleccionadas del motor específico.
- Los generadores, durante la falla, son representados por sus impedancias (transitoria, subtransitoria o en régimen permanente) seleccionadas.
- La fuente del diagrama unifilar se considerará como fuentes infinitas limitadas solo por su impedancia conectada en serie.
- Los dispositivos de protección (fusibles, reconectadores) no pueden reaccionar lo suficientemente rápido así que se les considerará “fijados”. Esto se aplica también a los equipos automatizados (cambiadores de toma bajo carga (LTC), reguladores, etc.).

Límites de cálculo:

- Se considera que las cargas y condensadores shunt son cargas de impedancias constantes.
- Un cálculo de flujo de falla no puede usar la tensión de pre-falla basada en un flujo de carga si la configuración de la red no proporciona una solución de flujo de carga convergente.

Los tipos de fallas que se pueden analizar son: LLL, LL, LLT y LT.

Donde:

- K_{max} & K_{min} = factor de seguridad.
- V = tensión nominal de pre-falla línea a neutro. Esta variable se define en las fuentes equivalentes del sistema. Se ajusta por la relación del número de espiras de cualquier transformador(es) entre la subestación y la localización de la falla.
- Z_1 = impedancia de secuencia positiva acumulativa entre la ubicación de la falla y la subestación, incluyendo la impedancia de la subestación.

- Z_0 = impedancia de secuencia homopolar acumulada entre la ubicación de la falla y la subestación, incluyendo la impedancia de la subestación.
- Z_f = impedancia de la falla misma.
- Z_g = impedancia a tierra de la falla misma.

Falla trifásica

En el cálculo del dominio de secuencia, la falla trifásica (LLL) y la falla trifásica a tierra (LLLT) son lo mismo. La corriente al final de una línea o cable o en un nodo o barra se calcula como sigue

$$I_{LLL} = \frac{V}{Z_1 + Z_f}$$

Falla bifásica a tierra

El cálculo de la falla LLT se efectúa calculando las corrientes de falla en las fases B y C usando:

$$\begin{aligned} I_{a1} &= \frac{V}{(Z_1 + Z_f + \frac{(Z_2 + Z_f) * (Z_0 + Z_f + 3Z_g)}{Z_0 + Z_2 + 2Z_f + 3Z_g})} \\ I_{a0} &= -I_{a1} * (\frac{Z_2 + Z_f}{Z_2 + Z_0 + 2Z_f + 3Z_g}) \\ I_{a2} &= -I_{a1} * (\frac{Z_0 + Z_f + 3Z_g}{Z_2 + Z_0 + 2Z_f + 3Z_g}) \\ I_{LLG_B} &= I_{a0} + a^2 I_{a1} + a I_{a2} \\ I_{LLG_C} &= I_{a0} + a I_{a1} + a^2 I_{a2} \\ I_{LLG_T} &= I_{LLG_B} + I_{LLG_C} \end{aligned}$$

$Z_2 = Z_1$ puesto que se presume que las impedancias de secuencia positiva y negativa son idénticas

Falla línea-línea

$$I_{LL} = \frac{\sqrt{3} * V}{2Z_1 + Z_f}$$

Falla línea monofásica a tierra

$$I_{LG} = \frac{3 * V}{2Z_1 + Z_0 + 3Z_g}$$

ANEXO II GENERACIÓN DE BASE DE DATOS

Alimentador	LLL	LLT	LL	LT	Enlace a Google Maps
COV01	9084	12880	7867	12566	https://maps.google.com/?q=-25.4721811766,-56.4478833498
COV01	8762	10506	7588	10811	https://maps.google.com/?q=-25.4732739139,-56.4489875315
COV01	8661	10175	7500	10484	https://maps.google.com/?q=-25.4732361968,-56.4494755194
COV01	8621	10068	7466	10369	https://maps.google.com/?q=-25.4733876003,-56.449491519
COV01	8422	9564	7294	9813	https://maps.google.com/?q=-25.4741573082,-56.4495682229
COV01	7953	8544	6887	8655	https://maps.google.com/?q=-25.4760241663,-56.4497556139
COV01	7851	8348	6799	8428	https://maps.google.com/?q=-25.4764422359,-56.4497976125
COV01	7718	8103	6684	8144	https://maps.google.com/?q=-25.4769935238,-56.4498592045
COV01	7387	7536	6397	7486	https://maps.google.com/?q=-25.4784163737,-56.4500018678
COV01	7135	7142	6179	7029	https://maps.google.com/?q=-25.479546233,-56.450112797
COV01	6708	6543	5810	6323	https://maps.google.com/?q=-25.4815823445,-56.4503798352
COV01	6102	5916	5284	5442	https://maps.google.com/?q=-25.484702214,-56.451380439
COV01	5961	5776	5162	5254	https://maps.google.com/?q=-25.4855172508,-56.4515524327
COV01	5868	5684	5082	5133	https://maps.google.com/?q=-25.4860724743,-56.451660174
COV01	5758	5583	4987	5012	https://maps.google.com/?q=-25.4863041665,-56.4512112974
COV01	5750	5576	4980	5003	https://maps.google.com/?q=-25.4863374493,-56.4512227987
COV01	5300	5165	4590	4533	https://maps.google.com/?q=-25.4873888582,-56.44928298
COV01	5006	4897	4335	4241	https://maps.google.com/?q=-25.4862645344,-56.4486622725
COV01	0	0	0	3599	https://maps.google.com/?q=-25.4903922438,-56.4444192246
COV01	0	0	0	3226	https://maps.google.com/?q=-25.4887213493,-56.4430496832
COV01	5143	4984	4454	4264	https://maps.google.com/?q=-25.4909537395,-56.4526888514
COV01	4867	4736	4215	4006	https://maps.google.com/?q=-25.4911467391,-56.4510945351
COV01	5094	4937	4412	4209	https://maps.google.com/?q=-25.4913232206,-56.4527669992
COV01	5056	4901	4379	4167	https://maps.google.com/?q=-25.4916159938,-56.4528293569
COV01	4808	4665	4164	3899	https://maps.google.com/?q=-25.4936265369,-56.4532526806
COV01	4707	4569	4077	3794	https://maps.google.com/?q=-25.4944929386,-56.4534373616
COV01	4500	4372	3897	3582	https://maps.google.com/?q=-25.4963893562,-56.4538402643
COV01	4241	4127	3673	3326	https://maps.google.com/?q=-25.49899134,-56.4543902343
COV01	4212	4099	3648	3298	https://maps.google.com/?q=-25.499299667,-56.454454794
COV01	3819	3726	3307	2929	https://maps.google.com/?q=-25.5039137253,-56.4554346342
COV01	3715	3627	3218	2835	https://maps.google.com/?q=-25.505284689,-56.4557258212
COV01	3653	3568	3164	2779	https://maps.google.com/?q=-25.5061419895,-56.4559052489
COV01	3531	3452	3058	2670	https://maps.google.com/?q=-25.5079290897,-56.4560329935
COV01	3416	3342	2958	2570	https://maps.google.com/?q=-25.5096699929,-56.4555871694
COV01	3409	3336	2952	2565	https://maps.google.com/?q=-25.509683576,-56.4556675314
COV01	3413	3339	2956	2567	https://maps.google.com/?q=-25.5097183663,-56.4555684282
COV01	3406	3333	2950	2561	https://maps.google.com/?q=-25.5098228181,-56.4555279606
COV01	3304	3235	2861	2473	https://maps.google.com/?q=-25.5114357862,-56.4549039876
COV01	2998	2942	2596	2214	https://maps.google.com/?q=-25.517070468,-56.4543613773
COV01	2889	2837	2502	2124	https://maps.google.com/?q=-25.5193984335,-56.4546551329
COV01	2843	2794	2463	2087	https://maps.google.com/?q=-25.5204116345,-56.4547963576
COV01	2768	2722	2398	2026	https://maps.google.com/?q=-25.5221649204,-56.4550457479
COV01	2676	2632	2317	1951	https://maps.google.com/?q=-25.5244621685,-56.4553771845

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

Ada Luján Paniagua Giménez - 2023

COV01	2597	2557	2249	1888	https://maps.google.com/?q=-25.5265215162,-56.4556948743
COV01	2442	2406	2115	1765	https://maps.google.com/?q=-25.531008334,-56.4563068979
COV01	2324	2293	2013	1673	https://maps.google.com/?q=-25.5344553897,-56.4579309748
COV01	2274	2244	1970	1634	https://maps.google.com/?q=-25.5358880297,-56.4589863419
COV01	2108	2091	1826	1528	https://maps.google.com/?q=-25.5378930317,-56.4553563849
COV01	2093	2078	1813	1518	https://maps.google.com/?q=-25.5378453546,-56.455074563
COV01	2097	2081	1816	1521	https://maps.google.com/?q=-25.5381404036,-56.4554904256
COV01	2225	2196	1927	1595	https://maps.google.com/?q=-25.5373998374,-56.4600670847
COV01	2217	2189	1920	1590	https://maps.google.com/?q=-25.5376251015,-56.4602315144
COV01	2152	2126	1864	1540	https://maps.google.com/?q=-25.5396941292,-56.4617668072
COV01	0	0	0	1469	https://maps.google.com/?q=-25.5385560685,-56.4646162478
COV01	0	0	0	1450	https://maps.google.com/?q=-25.5381106196,-56.4653762493
COV01	0	0	0	1381	https://maps.google.com/?q=-25.5359448019,-56.4677266809
COV01	0	0	0	1260	https://maps.google.com/?q=-25.5324775271,-56.4733490723
COV01	0	0	0	1187	https://maps.google.com/?q=-25.5301790232,-56.4774150487
COV01	0	0	0	1057	https://maps.google.com/?q=-25.5292679489,-56.486428823
COV01	0	0	0	947	https://maps.google.com/?q=-25.5375855421,-56.4874849328
COV01	0	0	0	1055	https://maps.google.com/?q=-25.529282628,-56.4865993329
COV01	0	0	0	1440	https://maps.google.com/?q=-25.5391189977,-56.4658147371
COV01	2137	2111	1851	1528	https://maps.google.com/?q=-25.5402009771,-56.4621433586
COV01	0	0	0	1518	https://maps.google.com/?q=-25.5404012979,-56.4617601189
COV01	2132	2107	1847	1525	https://maps.google.com/?q=-25.5403512493,-56.4622539362
COV01	2128	2103	1843	1522	https://maps.google.com/?q=-25.5402905592,-56.4623531122
COV01	2004	1982	1736	1427	https://maps.google.com/?q=-25.5453946024,-56.4642786236
COV01	1985	1963	1719	1412	https://maps.google.com/?q=-25.5462702659,-56.4643222289
COV01	0	0	0	1400	https://maps.google.com/?q=-25.5463190301,-56.463690166
COV01	1927	1907	1669	1369	https://maps.google.com/?q=-25.5490193481,-56.4644889837
COV01	1883	1864	1630	1335	https://maps.google.com/?q=-25.5512433066,-56.4646275634
COV01	1873	1855	1622	1328	https://maps.google.com/?q=-25.5517196605,-56.464658213
COV01	1871	1853	1621	1327	https://maps.google.com/?q=-25.551833389,-56.4646631494
COV01	1805	1788	1563	1277	https://maps.google.com/?q=-25.5553758314,-56.4646365571
COV01	0	0	0	1270	https://maps.google.com/?q=-25.5553600346,-56.4641704414
COV01	1796	1779	1555	1270	https://maps.google.com/?q=-25.5558884979,-56.4645850349
COV01	1730	1714	1498	1221	https://maps.google.com/?q=-25.5597238142,-56.4639616667
COV01	1726	1710	1494	1218	https://maps.google.com/?q=-25.5599777701,-56.4639230644
COV01	1605	1592	1390	1129	https://maps.google.com/?q=-25.5661191303,-56.4586253636
COV01	1598	1586	1384	1125	https://maps.google.com/?q=-25.5663189176,-56.4588632579
COV01	1544	1533	1337	1084	https://maps.google.com/?q=-25.5696631738,-56.455833339
COV01	1502	1491	1300	1053	https://maps.google.com/?q=-25.5729366502,-56.4564386602
COV01	1356	1356	1175	966	https://maps.google.com/?q=-25.5708867418,-56.4646046308
COV01	1470	1460	1273	1030	https://maps.google.com/?q=-25.575450955,-56.4571028249
COV01	1441	1431	1248	1009	https://maps.google.com/?q=-25.5777925577,-56.4580279608
COV01	1414	1407	1225	993	https://maps.google.com/?q=-25.5783353803,-56.4566034893
COV01	1392	1386	1206	980	https://maps.google.com/?q=-25.5788013108,-56.4553628983
COV01	1319	1317	1142	936	https://maps.google.com/?q=-25.5827638621,-56.4572452394
COV01	1313	1312	1137	932	https://maps.google.com/?q=-25.5830815977,-56.4573910406
COV01	1281	1282	1110	913	https://maps.google.com/?q=-25.5836720253,-56.4548539133
COV01	1382	1377	1197	974	https://maps.google.com/?q=-25.5790230066,-56.4548071288

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV01	1337	1334	1158	947	https://maps.google.com/?q=-25.5800466566,-56.452113764
COV01	1320	1319	1143	937	https://maps.google.com/?q=-25.5805924272,-56.4511734367
COV01	1252	1254	1084	895	https://maps.google.com/?q=-25.5830234385,-56.4471078298
COV01	1225	1229	1061	879	https://maps.google.com/?q=-25.584121033,-56.445451805
COV01	1205	1210	1043	866	https://maps.google.com/?q=-25.5849225329,-56.4440996869
COV01	1186	1192	1027	855	https://maps.google.com/?q=-25.5856707499,-56.442841294
COV01	1126	1134	975	824	https://maps.google.com/?q=-25.58633581,-56.438696957
COV01	1017	1029	881	767	https://maps.google.com/?q=-25.5877427445,-56.4300064698
COV01	920	933	797	712	https://maps.google.com/?q=-25.5890204741,-56.4204231817
COV01	846	860	732	667	https://maps.google.com/?q=-25.5942135768,-56.4135731488
COV01	0	0	0	607	https://maps.google.com/?q=-25.5868400573,-56.3975509976
COV01	0	0	0	566	https://maps.google.com/?q=-25.5832861005,-56.3926121293
COV01	0	0	0	723	https://maps.google.com/?q=-25.5942645802,-56.4322348472
COV01	0	0	0	811	https://maps.google.com/?q=-25.5846364412,-56.4384526564
COV01	1180	1187	1022	851	https://maps.google.com/?q=-25.5862753288,-56.44315849
COV01	0	0	0	835	https://maps.google.com/?q=-25.5872053811,-56.4497792335
COV01	0	0	0	831	https://maps.google.com/?q=-25.5870622882,-56.4503104145
COV01	0	0	0	831	https://maps.google.com/?q=-25.5869825671,-56.4502834669
COV01	0	0	0	835	https://maps.google.com/?q=-25.5778094701,-56.4418230281
COV01	0	0	0	915	https://maps.google.com/?q=-25.5803172807,-56.4496633311
COV01	0	0	0	940	https://maps.google.com/?q=-25.5806865937,-56.4523932648
COV01	1362	1358	1179	962	https://maps.google.com/?q=-25.5756250694,-56.4553362776
COV01	0	0	0	900	https://maps.google.com/?q=-25.5771091784,-56.4493314703
COV01	1434	1424	1241	1003	https://maps.google.com/?q=-25.5783802206,-56.4583065548
COV01	1422	1412	1231	994	https://maps.google.com/?q=-25.5793565531,-56.458781701
COV01	1367	1359	1184	955	https://maps.google.com/?q=-25.5840159991,-56.4610307633
COV01	1327	1319	1149	926	https://maps.google.com/?q=-25.58769073,-56.4627728325
COV01	1313	1306	1137	916	https://maps.google.com/?q=-25.58897622,-56.4633756037
COV01	1254	1247	1086	873	https://maps.google.com/?q=-25.5949919256,-56.4662123317
COV01	0	0	0	768	https://maps.google.com/?q=-25.5888053257,-56.4793380714
COV01	0	0	0	697	https://maps.google.com/?q=-25.5845224157,-56.4911650737
COV01	0	0	0	657	https://maps.google.com/?q=-25.5856160643,-56.4994281716
COV01	0	0	0	587	https://maps.google.com/?q=-25.5852453981,-56.5167984394
COV01	0	0	0	586	https://maps.google.com/?q=-25.5853761339,-56.5168875488
COV01	0	0	0	559	https://maps.google.com/?q=-25.5846818719,-56.5217160921
COV01	0	0	0	457	https://maps.google.com/?q=-25.6178760578,-56.5315432216
COV01	0	0	0	615	https://maps.google.com/?q=-25.5801473675,-56.4975058475
COV01	0	0	0	686	https://maps.google.com/?q=-25.5826220616,-56.4906627516
COV01	0	0	0	756	https://maps.google.com/?q=-25.589966075,-56.4796337319
COV01	1240	1234	1074	863	https://maps.google.com/?q=-25.5964192686,-56.4669215728
COV01	1215	1210	1052	849	https://maps.google.com/?q=-25.5966059167,-56.4689037147
COV01	1194	1189	1034	830	https://maps.google.com/?q=-25.6015368948,-56.4693757964
COV01	1137	1136	985	797	https://maps.google.com/?q=-25.6031168668,-56.4647572722
COV01	715	730	619	534	https://maps.google.com/?q=-25.6156550012,-56.4064745445
COV01	1036	1032	897	717	https://maps.google.com/?q=-25.6227028941,-56.4795598536
COV01	1030	1027	892	713	https://maps.google.com/?q=-25.6236172977,-56.479981237
COV01	979	976	848	677	https://maps.google.com/?q=-25.6320035279,-56.482599063
COV01	0	0	0	658	https://maps.google.com/?q=-25.6310130188,-56.4865765533

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV01	974	971	843	673	https://maps.google.com/?q=-25.632917456,-56.4829449477
COV01	970	968	840	671	https://maps.google.com/?q=-25.6335652675,-56.4831212978
COV01	970	967	840	671	https://maps.google.com/?q=-25.6335841997,-56.4830588231
COV01	969	966	839	670	https://maps.google.com/?q=-25.6338885962,-56.4831351205
COV01	967	964	837	668	https://maps.google.com/?q=-25.6342230667,-56.4829540406
COV01	959	956	830	663	https://maps.google.com/?q=-25.6357303003,-56.4824681754
COV01	958	956	830	662	https://maps.google.com/?q=-25.6358242704,-56.4824377045
COV01	957	955	829	662	https://maps.google.com/?q=-25.635767949,-56.4823025308
COV01	955	952	827	660	https://maps.google.com/?q=-25.6364227961,-56.482244744
COV01	955	952	827	660	https://maps.google.com/?q=-25.6364924618,-56.4822222842
COV01	949	947	822	656	https://maps.google.com/?q=-25.6375298573,-56.4818580235
COV01	940	937	814	649	https://maps.google.com/?q=-25.6390650345,-56.4820136619
COV01	952	949	824	658	https://maps.google.com/?q=-25.6365714045,-56.4825737875
COV01	973	971	843	673	https://maps.google.com/?q=-25.6329047446,-56.4830245509
COV01	1006	1004	871	700	https://maps.google.com/?q=-25.6232647767,-56.4762152499
COV01	1284	1278	1112	899	https://maps.google.com/?q=-25.5897385476,-56.4614634058
COV01	0	0	0	925	https://maps.google.com/?q=-25.5876541892,-56.4628502188
COV01	0	0	0	949	https://maps.google.com/?q=-25.578516157,-56.463322167
COV01	1510	1501	1307	1063	https://maps.google.com/?q=-25.5687303632,-56.4547974942
COV01	1380	1380	1195	985	https://maps.google.com/?q=-25.5623511663,-56.4525314451
COV01	1377	1376	1192	983	https://maps.google.com/?q=-25.5621700491,-56.4524670554
COV01	1374	1374	1190	982	https://maps.google.com/?q=-25.5620324636,-56.4524181063
COV01	1371	1371	1188	980	https://maps.google.com/?q=-25.5619771944,-56.4525826179
COV01	0	0	0	958	https://maps.google.com/?q=-25.5598810208,-56.4516539094
COV01	0	0	0	882	https://maps.google.com/?q=-25.5523573142,-56.4489821031
COV01	0	0	0	864	https://maps.google.com/?q=-25.5503354728,-56.4482611694
COV01	0	0	0	807	https://maps.google.com/?q=-25.5434724,-56.4458083214
COV01	0	0	0	776	https://maps.google.com/?q=-25.539404082,-56.4443533981
COV01	0	0	0	861	https://maps.google.com/?q=-25.550442067,-56.4480386511
COV01	1358	1359	1176	972	https://maps.google.com/?q=-25.5618035603,-56.4535675553
COV01	0	0	0	983	https://maps.google.com/?q=-25.5622923938,-56.4526980034
COV01	1509	1500	1306	1063	https://maps.google.com/?q=-25.5687478798,-56.4547422651
COV01	1698	1685	1471	1201	https://maps.google.com/?q=-25.5595920811,-56.4649639574
COV01	0	0	0	1116	https://maps.google.com/?q=-25.560820378,-56.469132262
COV01	0	0	0	968	https://maps.google.com/?q=-25.5712961014,-56.4727596835
COV01	1690	1677	1463	1196	https://maps.google.com/?q=-25.5598944735,-56.4651052737
COV01	1732	1720	1500	1231	https://maps.google.com/?q=-25.5564462306,-56.4669960342
COV01	0	0	0	1225	https://maps.google.com/?q=-25.5564038546,-56.4674228889
COV01	0	0	0	903	https://maps.google.com/?q=-25.5649242417,-56.481659443
COV01	0	0	0	779	https://maps.google.com/?q=-25.5629368507,-56.491299351
COV01	0	0	0	775	https://maps.google.com/?q=-25.5627859329,-56.4917622452
COV01	0	0	0	669	https://maps.google.com/?q=-25.5645833437,-56.5021654951
COV01	1855	1838	1606	1317	https://maps.google.com/?q=-25.5517952144,-56.4640965373
COV01	1872	1853	1621	1327	https://maps.google.com/?q=-25.5517146504,-56.4647118956
COV01	0	0	0	1297	https://maps.google.com/?q=-25.5513311282,-56.4624059561
COV01	0	0	0	1295	https://maps.google.com/?q=-25.5494551878,-56.4603628022
COV01	0	0	0	1586	https://maps.google.com/?q=-25.5375468854,-56.4603572062
COV01	2261	2251	1958	1675	https://maps.google.com/?q=-25.5268314472,-56.4473450269

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV01	1995	2000	1727	1495	https://maps.google.com/?q=-25.5288159002,-56.4406117627
COV01	0	0	0	1469	https://maps.google.com/?q=-25.5278340751,-56.4402647973
COV01	0	0	0	1182	https://maps.google.com/?q=-25.5140777204,-56.4352698524
COV01	0	0	0	1038	https://maps.google.com/?q=-25.5043844286,-56.431785363
COV01	0	0	0	942	https://maps.google.com/?q=-25.4968091107,-56.4304228882
COV01	0	0	0	1461	https://maps.google.com/?q=-25.5277253853,-56.4406113511
COV01	0	0	0	1490	https://maps.google.com/?q=-25.5290095698,-56.4406798897
COV01	0	0	0	1472	https://maps.google.com/?q=-25.5296967095,-56.4409209549
COV01	0	0	0	1469	https://maps.google.com/?q=-25.529772798,-56.4408491148
COV01	0	0	0	1343	https://maps.google.com/?q=-25.5351454617,-56.4428305267
COV01	0	0	0	1278	https://maps.google.com/?q=-25.5383344352,-56.4439708848
COV01	1568	1592	1358	1199	https://maps.google.com/?q=-25.5334019499,-56.4254741317
COV01	0	0	0	1128	https://maps.google.com/?q=-25.537706443,-56.427066376
COV01	0	0	0	1113	https://maps.google.com/?q=-25.5387179654,-56.427439084
COV01	0	0	0	1023	https://maps.google.com/?q=-25.5452292855,-56.429769854
COV01	0	0	0	980	https://maps.google.com/?q=-25.5487222402,-56.431028155
COV01	0	0	0	970	https://maps.google.com/?q=-25.5484006156,-56.4319356949
COV01	0	0	0	848	https://maps.google.com/?q=-25.5520580308,-56.440425027
COV01	0	0	0	778	https://maps.google.com/?q=-25.5595735711,-56.4409647513
COV01	0	0	0	889	https://maps.google.com/?q=-25.5566148175,-56.4283289637
COV01	0	0	0	857	https://maps.google.com/?q=-25.5592893565,-56.4256166895
COV01	0	0	0	995	https://maps.google.com/?q=-25.5458754547,-56.4272358633
COV01	0	0	0	1124	https://maps.google.com/?q=-25.5376244007,-56.4273936244
COV01	1546	1570	1339	1184	https://maps.google.com/?q=-25.5336870055,-56.4244725759
COV01	1364	1392	1181	1054	https://maps.google.com/?q=-25.5351673105,-56.414741524
COV01	948	980	821	750	https://maps.google.com/?q=-25.5372822509,-56.3799708814
COV01	0	0	0	1039	https://maps.google.com/?q=-25.5363474147,-56.4147485711
COV01	0	0	0	1121	https://maps.google.com/?q=-25.5337621453,-56.4209324958
COV01	1508	1533	1306	1156	https://maps.google.com/?q=-25.5308501089,-56.424569027
COV01	1238	1268	1072	963	https://maps.google.com/?q=-25.516570612,-56.4193879129
COV01	1099	1130	952	861	https://maps.google.com/?q=-25.5170360628,-56.4095895375
COV01	0	0	0	2061	https://maps.google.com/?q=-25.5204798416,-56.4541837512
COV01	2658	2627	2302	1968	https://maps.google.com/?q=-25.5204666061,-56.4511001511
COV01	2929	2879	2536	2167	https://maps.google.com/?q=-25.5171608433,-56.45336123
COV01	0	0	0	2026	https://maps.google.com/?q=-25.5180504193,-56.4507395465
COV01	0	0	0	2772	https://maps.google.com/?q=-25.5061257965,-56.4559901063
COV01	0	0	0	2298	https://maps.google.com/?q=-25.5092401494,-56.4618660306
COV01	0	0	0	2267	https://maps.google.com/?q=-25.5094539774,-56.4624004404
COV01	0	0	0	1994	https://maps.google.com/?q=-25.5101180561,-56.4654943819
COV01	0	0	0	1696	https://maps.google.com/?q=-25.5063759349,-56.4729119249
COV01	0	0	0	1136	https://maps.google.com/?q=-25.5146316548,-56.4889962432
COV01	0	0	0	2672	https://maps.google.com/?q=-25.505585931,-56.4535448996
COV01	0	0	0	2406	https://maps.google.com/?q=-25.5070653988,-56.4497674072
COV01	0	0	0	2346	https://maps.google.com/?q=-25.5080158475,-56.4500158733
COV01	0	0	0	2273	https://maps.google.com/?q=-25.5083773186,-56.4487114843
COV01	0	0	0	2173	https://maps.google.com/?q=-25.5032572344,-56.4483385605
COV01	3865	3789	3348	3025	https://maps.google.com/?q=-25.4981683726,-56.4568815322
COV01	4369	4256	3784	3472	https://maps.google.com/?q=-25.4959228392,-56.4542475859

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV01	4284	4179	3710	3400	https://maps.google.com/?q=-25.4957454687,-56.4547869054
COV01	4180	4086	3620	3315	https://maps.google.com/?q=-25.4961542423,-56.4554319221
COV01	4201	4105	3638	3332	https://maps.google.com/?q=-25.4955763137,-56.4553845189
COV01	4557	4435	3947	3663	https://maps.google.com/?q=-25.4946792475,-56.4524669229
COV01	4751	4614	4115	3849	https://maps.google.com/?q=-25.4935581818,-56.4536000386
COV01	4577	4459	3964	3696	https://maps.google.com/?q=-25.4925462458,-56.4533849699
COV01	4521	4408	3916	3647	https://maps.google.com/?q=-25.4949092789,-56.4538640404
COV01	5029	4875	4355	4137	https://maps.google.com/?q=-25.4915664473,-56.4530604718
COV01	5079	4924	4398	4195	https://maps.google.com/?q=-25.4913036077,-56.4528525496
COV01	5923	5741	5130	5211	https://maps.google.com/?q=-25.4854940513,-56.4517218815
COV01	4893	4802	4238	4162	https://maps.google.com/?q=-25.4813403441,-56.4561174681
COV01	0	0	0	5866	https://maps.google.com/?q=-25.4810576059,-56.4516476021
COV01	0	0	0	5733	https://maps.google.com/?q=-25.4808869312,-56.4520460057
COV01	0	0	0	5216	https://maps.google.com/?q=-25.4801508201,-56.4537328947
COV01	6710	6596	5811	6453	https://maps.google.com/?q=-25.4774755425,-56.4522524566
COV01	6668	6541	5775	6394	https://maps.google.com/?q=-25.4773477745,-56.4521796533
COV01	0	0	0	5733	https://maps.google.com/?q=-25.4766314205,-56.4541622238
COV01	7561	7854	6548	7856	https://maps.google.com/?q=-25.4772133536,-56.4493602212
COV01	6982	7003	6046	6909	https://maps.google.com/?q=-25.4780871639,-56.4475613248
COV01	6945	6952	6014	6853	https://maps.google.com/?q=-25.4779785408,-56.4475032841
COV01	7447	7680	6449	7657	https://maps.google.com/?q=-25.4768530218,-56.4493185079
COV02	9084	12880	7867	12566	https://maps.google.com/?q=-25.4730627211,-56.4477051106
COV02	8694	10171	7529	10492	https://maps.google.com/?q=-25.4717118949,-56.4488978687
COV02	8688	10145	7524	10467	https://maps.google.com/?q=-25.4716759528,-56.4488970181
COV02	8646	9961	7487	10282	https://maps.google.com/?q=-25.4711434585,-56.4488750753
COV02	8585	9721	7435	10032	https://maps.google.com/?q=-25.4707659819,-56.4488870115
COV02	8548	9580	7402	9880	https://maps.google.com/?q=-25.4705318285,-56.4489380617
COV02	8523	9492	7381	9783	https://maps.google.com/?q=-25.4703820266,-56.4489869003
COV02	8197	8526	7099	8616	https://maps.google.com/?q=-25.4684021188,-56.4490123356
COV02	8153	8459	7061	8531	https://maps.google.com/?q=-25.4683176151,-56.4491411157
COV02	8188	8512	7091	8597	https://maps.google.com/?q=-25.46837427,-56.4489883911
COV02	8066	8224	6986	8215	https://maps.google.com/?q=-25.4677189013,-56.4484176715
COV02	8007	8094	6935	8039	https://maps.google.com/?q=-25.4673953006,-56.4481373109
COV02	7991	8069	6920	8007	https://maps.google.com/?q=-25.4673924715,-56.4480610494
COV02	7676	7457	6647	7140	https://maps.google.com/?q=-25.4660569528,-56.4462662194
COV02	7646	7407	6622	7068	https://maps.google.com/?q=-25.4661210779,-56.4460325545
COV02	7530	7217	6521	6788	https://maps.google.com/?q=-25.4663801317,-56.445088575
COV02	7224	6837	6256	6122	https://maps.google.com/?q=-25.4670540173,-56.4424860904
COV02	7201	6817	6236	6095	https://maps.google.com/?q=-25.4669749985,-56.4424516629
COV02	7068	6658	6121	5815	https://maps.google.com/?q=-25.4674294475,-56.4410937826
COV02	6977	6581	6042	5716	https://maps.google.com/?q=-25.4671212212,-56.440912942
COV02	6826	6452	5911	5555	https://maps.google.com/?q=-25.4665593661,-56.4407699211
COV02	6603	6263	5719	5330	https://maps.google.com/?q=-25.4659476568,-56.4408708591
COV02	7026	6611	6085	5736	https://maps.google.com/?q=-25.4675326215,-56.4407075088
COV02	6292	5848	5449	4535	https://maps.google.com/?q=-25.4694664216,-56.4332357439
COV02	6140	5716	5317	4396	https://maps.google.com/?q=-25.4701688963,-56.4339016326
COV02	6223	5780	5389	4438	https://maps.google.com/?q=-25.4687968822,-56.4329052053
COV02	6183	5749	5354	4407	https://maps.google.com/?q=-25.4689500062,-56.4327966664

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV02	5888	5516	5099	4185	https://maps.google.com/?q=-25.4681327101,-56.4344071942
COV02	5422	5136	4696	3853	https://maps.google.com/?q=-25.467142476,-56.4365660949
COV02	5183	4936	4488	3688	https://maps.google.com/?q=-25.4666030235,-56.4377421666
COV02	4998	4779	4328	3562	https://maps.google.com/?q=-25.4661664597,-56.4386938938
COV02	4771	4586	4132	3410	https://maps.google.com/?q=-25.4663455464,-56.43964618
COV02	4972	4757	4306	3544	https://maps.google.com/?q=-25.4661032659,-56.4388316573
COV02	5830	5469	5049	4143	https://maps.google.com/?q=-25.4683693089,-56.4345447948
COV02	6198	5756	5368	4403	https://maps.google.com/?q=-25.4685497004,-56.4327791459
COV02	6118	5678	5299	4294	https://maps.google.com/?q=-25.4677579135,-56.4323626229
COV02	6111	5670	5292	4284	https://maps.google.com/?q=-25.4676809526,-56.4323221376
COV02	5671	5323	4911	3968	https://maps.google.com/?q=-25.4685330199,-56.4307966932
COV02	6036	5598	5228	4186	https://maps.google.com/?q=-25.4669249264,-56.4319244531
COV02	5729	5357	4961	3968	https://maps.google.com/?q=-25.4662882108,-56.4333677111
COV02	6007	5570	5202	4147	https://maps.google.com/?q=-25.4666217077,-56.4317649497
COV02	5986	5550	5184	4120	https://maps.google.com/?q=-25.4664028346,-56.4316498155
COV02	5937	5511	5141	4085	https://maps.google.com/?q=-25.4664881081,-56.431408477
COV02	5956	5520	5158	4081	https://maps.google.com/?q=-25.4660830006,-56.4314815735
COV02	5894	5461	5104	4003	https://maps.google.com/?q=-25.4654293379,-56.4311302094
COV02	5828	5398	5047	3921	https://maps.google.com/?q=-25.4647218945,-56.4307255303
COV02	5801	5372	5023	3888	https://maps.google.com/?q=-25.4644255276,-56.4305626628
COV02	5739	5313	4970	3813	https://maps.google.com/?q=-25.4637317473,-56.430207883
COV02	5714	5289	4948	3783	https://maps.google.com/?q=-25.4634442327,-56.4300608569
COV02	5298	4962	4589	3523	https://maps.google.com/?q=-25.4640269444,-56.4277818175
COV02	0	0	0	3418	https://maps.google.com/?q=-25.4642900072,-56.4268016637
COV02	0	0	0	3122	https://maps.google.com/?q=-25.4650616692,-56.4237816632
COV02	0	0	0	3265	https://maps.google.com/?q=-25.4629800005,-56.4261850054
COV02	0	0	0	3215	https://maps.google.com/?q=-25.4631004248,-56.4256601151
COV02	0	0	0	3013	https://maps.google.com/?q=-25.4636131207,-56.4234253362
COV02	0	0	0	3040	https://maps.google.com/?q=-25.4611900048,-56.4250833314
COV02	5625	5204	4871	3679	https://maps.google.com/?q=-25.4624120635,-56.4295329077
COV02	5603	5184	4852	3654	https://maps.google.com/?q=-25.4621589574,-56.4293875405
COV02	0	0	0	3506	https://maps.google.com/?q=-25.4625302195,-56.4280411607
COV02	5509	5095	4771	3549	https://maps.google.com/?q=-25.4610562861,-56.4287613344
COV02	5454	5043	4723	3488	https://maps.google.com/?q=-25.4603790549,-56.4284099115
COV02	5440	5030	4711	3472	https://maps.google.com/?q=-25.4602019217,-56.4283097803
COV02	5370	4965	4651	3397	https://maps.google.com/?q=-25.4593332002,-56.4278338201
COV02	5300	4899	4590	3322	https://maps.google.com/?q=-25.4589157742,-56.4288404375
COV02	0	0	0	3179	https://maps.google.com/?q=-25.4597455566,-56.4256110777
COV02	5350	4945	4633	3375	https://maps.google.com/?q=-25.459069478,-56.4276950393
COV02	5232	4835	4531	3251	https://maps.google.com/?q=-25.4575250712,-56.4268758247
COV02	5202	4807	4505	3221	https://maps.google.com/?q=-25.4571188151,-56.426676874
COV02	4958	4615	4294	3089	https://maps.google.com/?q=-25.456516055,-56.428128707
COV02	4839	4521	4191	3026	https://maps.google.com/?q=-25.4562139705,-56.4288561611
COV02	4386	4150	3798	2788	https://maps.google.com/?q=-25.4549864046,-56.4318121529
COV02	0	0	0	2879	https://maps.google.com/?q=-25.4581566725,-56.4224799936
COV02	0	0	0	2820	https://maps.google.com/?q=-25.4583538774,-56.4216806492
COV02	0	0	0	2731	https://maps.google.com/?q=-25.4587912868,-56.4206759691
COV02	5196	4801	4500	3215	https://maps.google.com/?q=-25.457037203,-56.4266369097

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV02	5195	4801	4499	3214	https://maps.google.com/?q=-25.4570286765,-56.4266327341
COV02	5112	4723	4427	3130	https://maps.google.com/?q=-25.4558676906,-56.4260641843
COV02	5089	4701	4407	3107	https://maps.google.com/?q=-25.4555391228,-56.4259032805
COV02	4831	4498	4183	2973	https://maps.google.com/?q=-25.4548945616,-56.4275069641
COV02	4767	4447	4128	2940	https://maps.google.com/?q=-25.4547226356,-56.4279103114
COV02	4658	4359	4034	2884	https://maps.google.com/?q=-25.4550571478,-56.4283717846
COV02	4597	4310	3981	2853	https://maps.google.com/?q=-25.4542550804,-56.4290072008
COV02	4336	4096	3755	2720	https://maps.google.com/?q=-25.4535233365,-56.4282366657
COV02	4569	4288	3957	2839	https://maps.google.com/?q=-25.4541716689,-56.4291883328
COV02	5074	4688	4394	3093	https://maps.google.com/?q=-25.4553272866,-56.4258116823
COV02	5037	4659	4362	3073	https://maps.google.com/?q=-25.4553557341,-56.4255640511
COV02	4744	4427	4109	2922	https://maps.google.com/?q=-25.4555866348,-56.4235639187
COV02	4688	4382	4060	2893	https://maps.google.com/?q=-25.4559403236,-56.4236664225
COV02	5055	4669	4377	3073	https://maps.google.com/?q=-25.4550371034,-56.4256868111
COV02	4776	4433	4137	2903	https://maps.google.com/?q=-25.4527693671,-56.4244921645
COV02	0	0	0	2827	https://maps.google.com/?q=-25.4528741184,-56.4234301494
COV02	0	0	0	2801	https://maps.google.com/?q=-25.4532264612,-56.4234272771
COV02	0	0	0	2806	https://maps.google.com/?q=-25.4528837517,-56.4231198396
COV02	4737	4402	4102	2883	https://maps.google.com/?q=-25.4528416735,-56.4247533314
COV02	4649	4325	4027	2826	https://maps.google.com/?q=-25.4516562251,-56.4239284324
COV02	4626	4306	4006	2814	https://maps.google.com/?q=-25.4517333334,-56.4237766667
COV02	4553	4242	3943	2767	https://maps.google.com/?q=-25.4507774377,-56.4234816624
COV02	4214	3948	3649	2565	https://maps.google.com/?q=-25.4474982039,-56.4216833226
COV02	4155	3897	3599	2531	https://maps.google.com/?q=-25.4468818169,-56.4213506481
COV02	4100	3848	3551	2498	https://maps.google.com/?q=-25.4462888888,-56.4210251502
COV02	3817	3614	3305	2360	https://maps.google.com/?q=-25.4452133334,-56.4233933333
COV02	3815	3612	3304	2360	https://maps.google.com/?q=-25.4452068176,-56.4234089481
COV02	3800	3600	3291	2352	https://maps.google.com/?q=-25.4451522826,-56.4235396532
COV02	3706	3521	3210	2306	https://maps.google.com/?q=-25.4447943045,-56.4243976162
COV02	0	0	0	2302	https://maps.google.com/?q=-25.4448649892,-56.4244316586
COV02	3673	3493	3181	2290	https://maps.google.com/?q=-25.4446501918,-56.4246957879
COV02	3546	3385	3071	2228	https://maps.google.com/?q=-25.4441750023,-56.4259349958
COV02	3568	3404	3090	2239	https://maps.google.com/?q=-25.4439466616,-56.424664622
COV02	0	0	0	2214	https://maps.google.com/?q=-25.4437356632,-56.4251467161
COV02	0	0	0	2182	https://maps.google.com/?q=-25.4431649965,-56.4247733278
COV02	0	0	0	2152	https://maps.google.com/?q=-25.4428866665,-56.4253916814
COV02	0	0	0	2126	https://maps.google.com/?q=-25.4424020014,-56.4250901637
COV02	4036	3792	3495	2460	https://maps.google.com/?q=-25.4455830979,-56.4206383115
COV02	4021	3779	3482	2451	https://maps.google.com/?q=-25.4454161391,-56.4205444333
COV02	0	0	0	2363	https://maps.google.com/?q=-25.4456273354,-56.4188298912
COV02	0	0	0	2340	https://maps.google.com/?q=-25.445685863,-56.4183547205
COV02	0	0	0	2292	https://maps.google.com/?q=-25.4458066968,-56.4173736604
COV02	0	0	0	2208	https://maps.google.com/?q=-25.4459200018,-56.4155533303
COV02	3995	3756	3460	2436	https://maps.google.com/?q=-25.4451272588,-56.4203863944
COV02	3809	3602	3298	2346	https://maps.google.com/?q=-25.4444366658,-56.4220049969
COV02	3944	3711	3415	2406	https://maps.google.com/?q=-25.4445360985,-56.4200629812
COV02	3831	3612	3318	2340	https://maps.google.com/?q=-25.4431761692,-56.4193681493
COV02	0	0	0	2291	https://maps.google.com/?q=-25.4428133426,-56.4203166673

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV02	3815	3598	3304	2331	https://maps.google.com/?q=-25.4429799122,-56.419267894
COV02	3743	3533	3241	2288	https://maps.google.com/?q=-25.44205793,-56.4187969467
COV02	3464	3285	3000	2125	https://maps.google.com/?q=-25.4379143292,-56.4181982408
COV02	0	0	0	2120	https://maps.google.com/?q=-25.4378966692,-56.4183333343
COV02	3445	3268	2984	2114	https://maps.google.com/?q=-25.4376212706,-56.4182819812
COV02	3406	3233	2950	2091	https://maps.google.com/?q=-25.4374574919,-56.4175852691
COV02	3377	3207	2925	2074	https://maps.google.com/?q=-25.4373346234,-56.4170625986
COV02	3334	3168	2887	2049	https://maps.google.com/?q=-25.4372050032,-56.4162571127
COV02	0	0	0	2014	https://maps.google.com/?q=-25.4364804353,-56.4157726246
COV02	0	0	0	1924	https://maps.google.com/?q=-25.4344134939,-56.4146776273
COV02	0	0	0	1697	https://maps.google.com/?q=-25.4282626706,-56.4119650451
COV02	0	0	0	1610	https://maps.google.com/?q=-25.426062053,-56.4117377623
COV02	0	0	0	1558	https://maps.google.com/?q=-25.4268850001,-56.412935
COV02	2861	2740	2478	1773	https://maps.google.com/?q=-25.4394352635,-56.4060684464
COV02	2858	2737	2475	1771	https://maps.google.com/?q=-25.4394556236,-56.4059938442
COV02	2581	2496	2235	1638	https://maps.google.com/?q=-25.4418559954,-56.40186625
COV02	2567	2484	2223	1631	https://maps.google.com/?q=-25.4419900043,-56.4020833316
COV02	2315	2260	2005	1506	https://maps.google.com/?q=-25.4433012975,-56.3976584874
COV02	2303	2249	1994	1500	https://maps.google.com/?q=-25.4433789463,-56.3973832293
COV02	2143	2104	1855	1417	https://maps.google.com/?q=-25.4444787779,-56.3935752179
COV02	0	0	0	1196	https://maps.google.com/?q=-25.4370247793,-56.3859652448
COV02	0	0	0	1389	https://maps.google.com/?q=-25.4448209226,-56.3922137334
COV02	0	0	0	1283	https://maps.google.com/?q=-25.4461800562,-56.3872512657
COV02	2134	2097	1848	1412	https://maps.google.com/?q=-25.4446714887,-56.3936669651
COV02	2313	2258	2003	1504	https://maps.google.com/?q=-25.4432484878,-56.3976346859
COV02	0	0	0	1691	https://maps.google.com/?q=-25.4371411861,-56.4046869269
COV02	0	0	0	1642	https://maps.google.com/?q=-25.4366921001,-56.4065132354
COV02	0	0	0	1561	https://maps.google.com/?q=-25.4357233343,-56.4096049993
COV02	0	0	0	1578	https://maps.google.com/?q=-25.4334553097,-56.4028083556
COV02	0	0	0	1550	https://maps.google.com/?q=-25.4340416678,-56.4017966728
COV02	0	0	0	1527	https://maps.google.com/?q=-25.4318683355,-56.4017834392
COV02	0	0	0	1307	https://maps.google.com/?q=-25.4239362743,-56.3964490227
COV02	0	0	0	1291	https://maps.google.com/?q=-25.4231700918,-56.3960374422
COV02	0	0	0	1197	https://maps.google.com/?q=-25.4198516724,-56.4004416688
COV02	0	0	0	1232	https://maps.google.com/?q=-25.42478341,-56.3927883624
COV02	0	0	0	1157	https://maps.google.com/?q=-25.4270594767,-56.3882041495
COV02	0	0	0	1154	https://maps.google.com/?q=-25.427155865,-56.388010008
COV02	0	0	0	1079	https://maps.google.com/?q=-25.4320100001,-56.3905766667
COV02	0	0	0	1042	https://maps.google.com/?q=-25.4292843258,-56.3795962525
COV02	3407	3234	2951	2092	https://maps.google.com/?q=-25.4370681738,-56.4186260424
COV02	0	0	0	2061	https://maps.google.com/?q=-25.436758908,-56.4179174582
COV02	0	0	0	2034	https://maps.google.com/?q=-25.43647685,-56.4172712221
COV02	0	0	0	1952	https://maps.google.com/?q=-25.4344523484,-56.4169523712
COV02	3387	3216	2933	2080	https://maps.google.com/?q=-25.4372152901,-56.4189707531
COV02	3361	3193	2911	2065	https://maps.google.com/?q=-25.4373984379,-56.4194000544
COV02	3335	3169	2888	2050	https://maps.google.com/?q=-25.4376069305,-56.4198581913
COV02	0	0	0	1875	https://maps.google.com/?q=-25.4334683334,-56.418575
COV02	3266	3108	2829	2010	https://maps.google.com/?q=-25.4382400001,-56.4209983333

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV02	3233	3079	2800	1994	https://maps.google.com/?q=-25.4379483334,-56.4212883333
COV02	3238	3082	2804	1993	https://maps.google.com/?q=-25.4383756963,-56.4215623231
COV02	0	0	0	1926	https://maps.google.com/?q=-25.4395556458,-56.4201757636
COV02	3188	3036	2760	1964	https://maps.google.com/?q=-25.4387322098,-56.4225163472
COV02	2962	2832	2565	1832	https://maps.google.com/?q=-25.4395777824,-56.4272880063
COV02	2863	2747	2479	1785	https://maps.google.com/?q=-25.440492939,-56.4261019728
COV02	2853	2738	2471	1781	https://maps.google.com/?q=-25.4405881086,-56.4262122282
COV02	2821	2710	2443	1765	https://maps.google.com/?q=-25.4409372556,-56.4256183319
COV02	2766	2663	2396	1739	https://maps.google.com/?q=-25.4410439219,-56.4250077387
COV02	2952	2823	2556	1826	https://maps.google.com/?q=-25.4395326971,-56.4275271212
COV02	2860	2739	2477	1772	https://maps.google.com/?q=-25.4386902247,-56.4296044447
COV02	2825	2707	2446	1752	https://maps.google.com/?q=-25.4382948347,-56.4303977344
COV02	2806	2689	2430	1741	https://maps.google.com/?q=-25.4380767751,-56.4308352128
COV02	2801	2685	2426	1738	https://maps.google.com/?q=-25.4380205407,-56.4309480482
COV02	2797	2682	2423	1736	https://maps.google.com/?q=-25.4379777938,-56.4310306992
COV02	2789	2674	2415	1732	https://maps.google.com/?q=-25.4378688981,-56.4309590347
COV02	2703	2595	2341	1680	https://maps.google.com/?q=-25.4363263255,-56.4294691098
COV02	2684	2578	2324	1669	https://maps.google.com/?q=-25.4365976858,-56.4290166615
COV02	2670	2565	2312	1663	https://maps.google.com/?q=-25.4364033398,-56.4288783347
COV02	2647	2546	2293	1652	https://maps.google.com/?q=-25.4369584335,-56.428471876
COV02	2640	2540	2287	1649	https://maps.google.com/?q=-25.4370663104,-56.4284246843
COV02	2592	2497	2244	1625	https://maps.google.com/?q=-25.4374366552,-56.4275881223
COV02	2447	2370	2119	1555	https://maps.google.com/?q=-25.435460004,-56.4256316658
COV02	2687	2581	2327	1671	https://maps.google.com/?q=-25.4360929746,-56.4298243823
COV02	2621	2520	2270	1633	https://maps.google.com/?q=-25.4347008523,-56.4286309619
COV02	2614	2513	2264	1628	https://maps.google.com/?q=-25.4345308623,-56.4285162697
COV02	2573	2477	2228	1609	https://maps.google.com/?q=-25.4348977076,-56.4278228329
COV02	2569	2474	2225	1607	https://maps.google.com/?q=-25.4348460283,-56.4277805282
COV02	2529	2439	2190	1588	https://maps.google.com/?q=-25.4353482928,-56.4272336573
COV02	2569	2471	2224	1602	https://maps.google.com/?q=-25.4334575926,-56.4277627852
COV02	2490	2399	2157	1556	https://maps.google.com/?q=-25.4313632126,-56.4267332361
COV02	2475	2385	2143	1546	https://maps.google.com/?q=-25.430929699,-56.4265192695
COV02	2466	2376	2135	1541	https://maps.google.com/?q=-25.4310436361,-56.4262436186
COV02	2446	2358	2118	1529	https://maps.google.com/?q=-25.4306401254,-56.425881847
COV02	2465	2376	2135	1541	https://maps.google.com/?q=-25.4310618923,-56.4262527037
COV02	2402	2317	2080	1503	https://maps.google.com/?q=-25.4325892381,-56.4261309699
COV02	2400	2315	2078	1502	https://maps.google.com/?q=-25.4325548133,-56.4261072041
COV02	2392	2308	2071	1497	https://maps.google.com/?q=-25.4327366508,-56.4258297908
COV02	2366	2284	2049	1482	https://maps.google.com/?q=-25.4331353351,-56.4250056804
COV02	0	0	0	1418	https://maps.google.com/?q=-25.4304287838,-56.4237622094
COV02	0	0	0	1394	https://maps.google.com/?q=-25.4293862977,-56.4232572961
COV02	0	0	0	1393	https://maps.google.com/?q=-25.4294016912,-56.4232289089
COV02	0	0	0	1375	https://maps.google.com/?q=-25.4285580884,-56.4228081686
COV02	0	0	0	1375	https://maps.google.com/?q=-25.4285648742,-56.4227926001
COV02	2475	2385	2143	1546	https://maps.google.com/?q=-25.4309211777,-56.426515047
COV02	2407	2322	2084	1506	https://maps.google.com/?q=-25.4289856414,-56.4255559664
COV02	2369	2287	2052	1484	https://maps.google.com/?q=-25.4278602219,-56.4249983179
COV02	2341	2261	2027	1467	https://maps.google.com/?q=-25.427010166,-56.4245359383

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV02	2335	2255	2022	1464	https://maps.google.com/?q=-25.4269486199,-56.4246665164
COV02	2330	2251	2018	1461	https://maps.google.com/?q=-25.4266731001,-56.4243525966
COV02	2276	2200	1971	1429	https://maps.google.com/?q=-25.4249580223,-56.4234197244
COV02	2229	2157	1931	1401	https://maps.google.com/?q=-25.4234461135,-56.4226003348
COV02	2219	2147	1921	1395	https://maps.google.com/?q=-25.4230797399,-56.4223983724
COV02	2201	2131	1906	1385	https://maps.google.com/?q=-25.4224935058,-56.4220753687
COV02	2170	2102	1880	1366	https://maps.google.com/?q=-25.4228833399,-56.4208316639
COV02	2190	2121	1897	1378	https://maps.google.com/?q=-25.422118376,-56.4218640769
COV02	2181	2114	1888	1378	https://maps.google.com/?q=-25.4241832104,-56.4216516639
COV02	2213	2145	1916	1399	https://maps.google.com/?q=-25.4257016664,-56.4220733315
COV02	2356	2276	2041	1478	https://maps.google.com/?q=-25.427716276,-56.4252508122
COV02	2340	2262	2027	1470	https://maps.google.com/?q=-25.4280466668,-56.4252166667
COV02	2445	2360	2118	1534	https://maps.google.com/?q=-25.4308581119,-56.4274935791
COV02	2503	2414	2168	1570	https://maps.google.com/?q=-25.4339042363,-56.4265358028
COV02	2521	2430	2183	1579	https://maps.google.com/?q=-25.4329830433,-56.4285528402
COV02	2420	2342	2096	1530	https://maps.google.com/?q=-25.4321700605,-56.4304697774
COV02	2362	2290	2046	1502	https://maps.google.com/?q=-25.4311340036,-56.4298701626
COV02	2299	2234	1991	1471	https://maps.google.com/?q=-25.4302275376,-56.429166302
COV02	2281	2219	1976	1463	https://maps.google.com/?q=-25.4300889066,-56.4295568083
COV02	2277	2215	1972	1460	https://maps.google.com/?q=-25.4297868007,-56.4289816693
COV02	0	0	0	1459	https://maps.google.com/?q=-25.4298180472,-56.4289233442
COV02	2253	2194	1952	1449	https://maps.google.com/?q=-25.4293140789,-56.4287345327
COV02	0	0	0	1435	https://maps.google.com/?q=-25.4289933334,-56.4292983333
COV02	0	0	0	1434	https://maps.google.com/?q=-25.4289433334,-56.4292633333
COV02	2247	2188	1946	1446	https://maps.google.com/?q=-25.4293650035,-56.4285866674
COV02	2219	2163	1922	1432	https://maps.google.com/?q=-25.428767033,-56.4283414852
COV02	2210	2155	1914	1427	https://maps.google.com/?q=-25.4285731343,-56.4282619826
COV02	2208	2153	1912	1426	https://maps.google.com/?q=-25.4285895652,-56.4282145271
COV02	2207	2153	1912	1426	https://maps.google.com/?q=-25.4285778399,-56.4282066416
COV02	2181	2129	1889	1412	https://maps.google.com/?q=-25.4280199992,-56.4281299955
COV02	2149	2100	1861	1396	https://maps.google.com/?q=-25.4272931464,-56.4278377274
COV02	2400	2324	2079	1521	https://maps.google.com/?q=-25.4320283959,-56.4308712163
COV02	2323	2256	2012	1483	https://maps.google.com/?q=-25.4313478516,-56.4324505178
COV02	2247	2188	1946	1445	https://maps.google.com/?q=-25.4297683364,-56.4319533334
COV02	2671	2566	2313	1662	https://maps.google.com/?q=-25.4363884708,-56.4301600271
COV02	2663	2559	2307	1657	https://maps.google.com/?q=-25.4365345185,-56.430326111
COV02	2664	2559	2307	1658	https://maps.google.com/?q=-25.435709898,-56.4303631227
COV02	2603	2507	2255	1629	https://maps.google.com/?q=-25.4350333334,-56.4312216667
COV02	4622	4301	4003	2809	https://maps.google.com/?q=-25.4515415485,-56.4241999451
COV02	0	0	0	3120	https://maps.google.com/?q=-25.4569123398,-56.4282975628
COV02	0	0	0	2895	https://maps.google.com/?q=-25.4557815083,-56.4309211572
COV02	5036	4714	4362	3246	https://maps.google.com/?q=-25.4593840493,-56.4307313099
COV02	5476	5070	4743	3529	https://maps.google.com/?q=-25.4612013314,-56.4286498212
COV02	0	0	0	3500	https://maps.google.com/?q=-25.4614450058,-56.4287600097
COV02	0	0	0	3400	https://maps.google.com/?q=-25.4617000043,-56.4277866675
COV02	5541	5140	4799	3628	https://maps.google.com/?q=-25.4622335618,-56.4299692735
COV02	0	0	0	3436	https://maps.google.com/?q=-25.4615149533,-56.4316356444
COV02	5796	5368	5020	3885	https://maps.google.com/?q=-25.4644163246,-56.4305833275

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV02	6064	5651	5252	4329	https://maps.google.com/?q=-25.4695617268,-56.4316985192
COV03	9084	12880	7867	12566	https://maps.google.com/?q=-25.4729976015,-56.4483993085
COV03	8091	8223	7007	8199	https://maps.google.com/?q=-25.4677874126,-56.4471713534
COV03	7951	7991	6885	7900	https://maps.google.com/?q=-25.46714343,-56.446872347
COV03	7876	7871	6821	7746	https://maps.google.com/?q=-25.466790255,-56.4467154946
COV03	7806	7773	6760	7629	https://maps.google.com/?q=-25.4667353343,-56.4469706771
COV03	7770	7724	6729	7572	https://maps.google.com/?q=-25.466847448,-56.447013961
COV03	7756	7685	6716	7506	https://maps.google.com/?q=-25.4662517529,-56.4466816927
COV03	7708	7613	6675	7413	https://maps.google.com/?q=-25.4659984849,-56.4466657951
COV03	7646	7521	6622	7295	https://maps.google.com/?q=-25.4657419408,-56.4464377811
COV03	7507	7320	6501	7035	https://maps.google.com/?q=-25.4651480002,-56.4459098968
COV03	7319	7058	6338	6700	https://maps.google.com/?q=-25.4657820343,-56.4449580716
COV03	7285	7014	6309	6651	https://maps.google.com/?q=-25.4658540974,-56.4448432493
COV03	7264	6988	6291	6623	https://maps.google.com/?q=-25.4658901748,-56.4447700338
COV03	7240	6964	6270	6589	https://maps.google.com/?q=-25.4658130794,-56.4447218353
COV03	7271	6993	6297	6617	https://maps.google.com/?q=-25.4655295027,-56.4448232467
COV03	7275	6993	6301	6611	https://maps.google.com/?q=-25.4663445838,-56.4452181112
COV03	7345	7094	6361	6745	https://maps.google.com/?q=-25.4644323136,-56.4452738159
COV03	7130	6826	6175	6380	https://maps.google.com/?q=-25.4634395303,-56.444391476
COV03	6853	6519	5935	5936	https://maps.google.com/?q=-25.4621043181,-56.4431353124
COV03	6806	6468	5894	5864	https://maps.google.com/?q=-25.4618688454,-56.4429136934
COV03	6428	6132	5567	5430	https://maps.google.com/?q=-25.4608957814,-56.4442022942
COV03	6672	6326	5778	5664	https://maps.google.com/?q=-25.4611826515,-56.4422678372
COV03	6493	6140	5623	5406	https://maps.google.com/?q=-25.4602215776,-56.441369846
COV03	6387	6049	5532	5291	https://maps.google.com/?q=-25.4605264404,-56.4409995237
COV03	6106	5807	5288	4997	https://maps.google.com/?q=-25.4612811197,-56.4399514266
COV03	6351	5995	5500	5209	https://maps.google.com/?q=-25.4594128313,-56.4406394528
COV03	5956	5659	5158	4808	https://maps.google.com/?q=-25.4605499634,-56.4391608419
COV03	5282	5078	4574	4188	https://maps.google.com/?q=-25.463081106,-56.4389548096
COV03	5170	4980	4477	4091	https://maps.google.com/?q=-25.4633202052,-56.4383920095
COV03	5190	4999	4495	4109	https://maps.google.com/?q=-25.4634948778,-56.4391725016
COV03	5111	4929	4426	4040	https://maps.google.com/?q=-25.4637036467,-56.4388351078
COV03	4970	4806	4304	3921	https://maps.google.com/?q=-25.4640559844,-56.4381188911
COV03	4783	4640	4142	3764	https://maps.google.com/?q=-25.4646216668,-56.438775
COV03	4774	4632	4134	3757	https://maps.google.com/?q=-25.4645708807,-56.437072212
COV03	4618	4493	3999	3628	https://maps.google.com/?q=-25.4637574482,-56.4366406274
COV03	4649	4521	4026	3654	https://maps.google.com/?q=-25.4649114727,-56.4363722411
COV03	4432	4327	3838	3477	https://maps.google.com/?q=-25.4655339102,-56.4350930045
COV03	6242	5885	5406	5062	https://maps.google.com/?q=-25.4587316643,-56.4401192718
COV03	6236	5879	5401	5055	https://maps.google.com/?q=-25.4586980566,-56.4400887747
COV03	6221	5866	5388	5039	https://maps.google.com/?q=-25.458721951,-56.4400171799
COV03	6064	5707	5252	4830	https://maps.google.com/?q=-25.4576383664,-56.4391271574
COV03	5787	5476	5012	4565	https://maps.google.com/?q=-25.4568040801,-56.4402523935
COV03	5921	5565	5127	4649	https://maps.google.com/?q=-25.4567112242,-56.4382858393
COV03	5892	5537	5103	4613	https://maps.google.com/?q=-25.4565198688,-56.4381136979
COV03	5853	5499	5069	4566	https://maps.google.com/?q=-25.4562614082,-56.4378813103
COV03	5811	5458	5032	4514	https://maps.google.com/?q=-25.4559724662,-56.4376190402
COV03	5572	5226	4825	4232	https://maps.google.com/?q=-25.4542784864,-56.43607204

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV03	5547	5202	4804	4203	https://maps.google.com/?q=-25.4544287565,-56.4358633392
COV03	5375	5049	4655	4033	https://maps.google.com/?q=-25.4551997033,-56.4347022458
COV03	5335	5016	4620	4000	https://maps.google.com/?q=-25.455369994,-56.4345447284
COV03	5138	4855	4450	3839	https://maps.google.com/?q=-25.4540125908,-56.4340094685
COV03	5121	4841	4435	3825	https://maps.google.com/?q=-25.4539243948,-56.4339588657
COV03	5005	4745	4335	3734	https://maps.google.com/?q=-25.4533310832,-56.433611646
COV03	4907	4662	4249	3657	https://maps.google.com/?q=-25.4535933334,-56.4330366667
COV03	4481	4300	3880	3334	https://maps.google.com/?q=-25.4547386458,-56.4303775502
COV03	4284	4130	3710	3188	https://maps.google.com/?q=-25.4553136793,-56.4290426468
COV03	4270	4118	3698	3178	https://maps.google.com/?q=-25.4552299214,-56.428991448
COV03	4926	4678	4266	3672	https://maps.google.com/?q=-25.4529362775,-56.4333321863
COV03	5303	4990	4592	3973	https://maps.google.com/?q=-25.4555636524,-56.4349024575
COV03	5036	4771	4362	3758	https://maps.google.com/?q=-25.4569310416,-56.435646488
COV03	4721	4506	4089	3514	https://maps.google.com/?q=-25.4570402683,-56.4315033006
COV03	5513	5178	4775	4181	https://maps.google.com/?q=-25.4540357478,-56.4358488147
COV03	5373	5064	4653	4062	https://maps.google.com/?q=-25.4534515667,-56.4353116068
COV03	5325	5024	4611	4021	https://maps.google.com/?q=-25.4532869425,-56.4355404986
COV03	5094	4832	4411	3833	https://maps.google.com/?q=-25.4522602661,-56.4342144844
COV03	5515	5171	4776	4166	https://maps.google.com/?q=-25.4539264131,-56.4365415281
COV03	5366	5028	4647	4000	https://maps.google.com/?q=-25.4529800959,-56.4378048903
COV03	5295	4960	4585	3921	https://maps.google.com/?q=-25.4525052574,-56.4384365864
COV03	5281	4947	4573	3906	https://maps.google.com/?q=-25.4524123081,-56.4385605281
COV03	5279	4945	4572	3903	https://maps.google.com/?q=-25.4524307619,-56.4385846784
COV03	5244	4911	4541	3866	https://maps.google.com/?q=-25.4521611917,-56.4388953733
COV03	5205	4874	4508	3824	https://maps.google.com/?q=-25.4518355111,-56.4385977913
COV03	5145	4817	4456	3760	https://maps.google.com/?q=-25.4513305476,-56.4381363985
COV03	5060	4736	4382	3671	https://maps.google.com/?q=-25.4505868841,-56.4374612814
COV03	4976	4656	4309	3584	https://maps.google.com/?q=-25.4498279785,-56.4367722659
COV03	4949	4631	4286	3556	https://maps.google.com/?q=-25.4495793121,-56.4365464286
COV03	4769	4486	4130	3422	https://maps.google.com/?q=-25.448845195,-56.4375617963
COV03	4854	4541	4204	3460	https://maps.google.com/?q=-25.4486857237,-56.4357351514
COV03	4841	4529	4193	3447	https://maps.google.com/?q=-25.4484896483,-56.4359961488
COV03	4807	4497	4163	3413	https://maps.google.com/?q=-25.448213492,-56.4363627095
COV03	4753	4446	4116	3360	https://maps.google.com/?q=-25.4477710464,-56.4369521227
COV03	4736	4430	4101	3343	https://maps.google.com/?q=-25.4476278729,-56.4371428529
COV03	4703	4403	4073	3319	https://maps.google.com/?q=-25.4477845942,-56.4373244804
COV03	4692	4388	4063	3300	https://maps.google.com/?q=-25.4472596824,-56.4376333381
COV03	4612	4314	3994	3223	https://maps.google.com/?q=-25.446564738,-56.4385268335
COV03	4537	4253	3929	3170	https://maps.google.com/?q=-25.4469880123,-56.4389209795
COV03	4548	4253	3938	3161	https://maps.google.com/?q=-25.4459714655,-56.4392716171
COV03	4495	4210	3892	3125	https://maps.google.com/?q=-25.4462719482,-56.4395578158
COV03	4484	4202	3883	3117	https://maps.google.com/?q=-25.4462182134,-56.4396199372
COV03	4464	4186	3866	3104	https://maps.google.com/?q=-25.4464462433,-56.4397238264
COV03	4454	4178	3857	3097	https://maps.google.com/?q=-25.4463790226,-56.4397599047
COV03	4534	4240	3926	3148	https://maps.google.com/?q=-25.4458545449,-56.4394468829
COV03	4524	4232	3917	3142	https://maps.google.com/?q=-25.4457723914,-56.4390938731
COV03	4518	4227	3912	3138	https://maps.google.com/?q=-25.4457461748,-56.4391323349
COV03	4493	4205	3891	3116	https://maps.google.com/?q=-25.4455132337,-56.4388624845

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV03	4474	4189	3875	3102	https://maps.google.com/?q=-25.4453688989,-56.4387982181
COV03	4437	4156	3842	3071	https://maps.google.com/?q=-25.4451579256,-56.4388792507
COV03	4353	4083	3769	3004	https://maps.google.com/?q=-25.4443088512,-56.437787327
COV03	4311	4049	3733	2976	https://maps.google.com/?q=-25.4441010871,-56.4380701028
COV03	4261	4008	3690	2943	https://maps.google.com/?q=-25.4447756952,-56.4371723302
COV03	4254	4003	3684	2939	https://maps.google.com/?q=-25.4447358624,-56.4371352325
COV03	4326	4060	3747	2983	https://maps.google.com/?q=-25.444076288,-56.4375788939
COV03	4559	4271	3948	3186	https://maps.google.com/?q=-25.4462728008,-56.4382440377
COV03	4607	4320	3990	3240	https://maps.google.com/?q=-25.4468062304,-56.4371982742
COV03	4430	4176	3836	3116	https://maps.google.com/?q=-25.4458311617,-56.4362627612
COV03	4385	4140	3797	3086	https://maps.google.com/?q=-25.4455810794,-56.4360228272
COV03	4130	3928	3577	2913	https://maps.google.com/?q=-25.4468211329,-56.4343406621
COV03	4274	4048	3702	3010	https://maps.google.com/?q=-25.4449504947,-56.4354163941
COV03	5064	4745	4385	3686	https://maps.google.com/?q=-25.4508783662,-56.4387315144
COV03	4987	4678	4319	3616	https://maps.google.com/?q=-25.4504441792,-56.4393029405
COV03	4981	4673	4314	3611	https://maps.google.com/?q=-25.4504120495,-56.439345226
COV03	4977	4669	4310	3608	https://maps.google.com/?q=-25.4504335484,-56.439363595
COV03	4939	4636	4278	3574	https://maps.google.com/?q=-25.4501707585,-56.4396627817
COV03	4900	4604	4244	3544	https://maps.google.com/?q=-25.4499871768,-56.4394753347
COV03	4898	4603	4242	3543	https://maps.google.com/?q=-25.450002243,-56.4398845584
COV03	4893	4598	4237	3539	https://maps.google.com/?q=-25.4499966601,-56.4398449938
COV03	4797	4521	4154	3467	https://maps.google.com/?q=-25.4495676926,-56.4393882081
COV03	4771	4499	4132	3448	https://maps.google.com/?q=-25.4495933334,-56.4392016667
COV03	4803	4525	4159	3472	https://maps.google.com/?q=-25.4496070361,-56.4404046709
COV03	4710	4449	4079	3403	https://maps.google.com/?q=-25.4492168796,-56.4409181309
COV03	4674	4419	4048	3377	https://maps.google.com/?q=-25.449418732,-56.4410601246
COV03	4636	4388	4015	3349	https://maps.google.com/?q=-25.4496230514,-56.4412280059
COV03	4663	4410	4038	3369	https://maps.google.com/?q=-25.4493674475,-56.4411209482
COV03	4564	4328	3952	3297	https://maps.google.com/?q=-25.4484803913,-56.4402011028
COV03	4465	4245	3867	3226	https://maps.google.com/?q=-25.4486111373,-56.4396535437
COV03	4427	4214	3834	3199	https://maps.google.com/?q=-25.4487781475,-56.4394309128
COV03	4418	4206	3826	3193	https://maps.google.com/?q=-25.4488226369,-56.4394858278
COV03	4398	4189	3809	3179	https://maps.google.com/?q=-25.4489102019,-56.4392558878
COV03	4382	4176	3795	3167	https://maps.google.com/?q=-25.4489987604,-56.4393311878
COV03	4658	4402	4034	3358	https://maps.google.com/?q=-25.4488909761,-56.4413470273
COV03	4650	4395	4027	3348	https://maps.google.com/?q=-25.4487942173,-56.4412418931
COV03	4654	4399	4031	3355	https://maps.google.com/?q=-25.4488694311,-56.4413757542
COV03	4597	4348	3981	3306	https://maps.google.com/?q=-25.448507703,-56.4418532214
COV03	4578	4331	3965	3290	https://maps.google.com/?q=-25.4483856412,-56.4420148973
COV03	4595	4346	3979	3304	https://maps.google.com/?q=-25.4485250001,-56.4418583333
COV03	4649	4394	4026	3350	https://maps.google.com/?q=-25.4489096531,-56.4414130687
COV03	4894	4599	4238	3540	https://maps.google.com/?q=-25.4500242176,-56.4399052246
COV03	4873	4582	4220	3524	https://maps.google.com/?q=-25.450125439,-56.4400004316
COV03	4840	4556	4192	3499	https://maps.google.com/?q=-25.4499855254,-56.4401770917
COV03	4811	4532	4167	3478	https://maps.google.com/?q=-25.4504281803,-56.4402887848
COV03	4755	4486	4118	3436	https://maps.google.com/?q=-25.4507064413,-56.4405541546
COV03	4710	4449	4079	3403	https://maps.google.com/?q=-25.4509242324,-56.4407719534
COV03	4661	4409	4037	3368	https://maps.google.com/?q=-25.4503114183,-56.4410782823

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV03	4513	4285	3908	3260	https://maps.google.com/?q=-25.4496680988,-56.441931844
COV03	5211	4880	4513	3831	https://maps.google.com/?q=-25.4524316174,-56.4391424175
COV03	5122	4802	4436	3748	https://maps.google.com/?q=-25.4530077881,-56.4396756427
COV03	4958	4668	4293	3620	https://maps.google.com/?q=-25.4536591148,-56.4388239606
COV03	5054	4742	4377	3686	https://maps.google.com/?q=-25.4534572893,-56.4400916447
COV03	4997	4691	4328	3634	https://maps.google.com/?q=-25.453841517,-56.4404472409
COV03	4760	4482	4122	3425	https://maps.google.com/?q=-25.455510729,-56.4419889019
COV03	4714	4444	4083	3391	https://maps.google.com/?q=-25.4557179917,-56.4417437057
COV03	4657	4391	4033	3337	https://maps.google.com/?q=-25.4562721444,-56.4426921536
COV03	4591	4336	3976	3288	https://maps.google.com/?q=-25.4565657814,-56.4423039607
COV03	4589	4330	3974	3279	https://maps.google.com/?q=-25.4567929938,-56.4431732556
COV03	4537	4284	3929	3235	https://maps.google.com/?q=-25.4571999106,-56.4435490647
COV03	4381	4155	3794	3125	https://maps.google.com/?q=-25.4580564627,-56.4443402161
COV03	4303	4089	3726	3071	https://maps.google.com/?q=-25.4585037902,-56.4447483724
COV03	4377	4151	3790	3122	https://maps.google.com/?q=-25.4580777414,-56.4443115437
COV03	4212	4013	3648	3008	https://maps.google.com/?q=-25.4588572342,-56.4432611857
COV03	4207	4009	3644	3005	https://maps.google.com/?q=-25.4588866119,-56.4432868198
COV03	4174	3981	3614	2982	https://maps.google.com/?q=-25.4590417612,-56.4430065019
COV03	4125	3939	3572	2948	https://maps.google.com/?q=-25.4592835917,-56.4426829505
COV03	4108	3925	3557	2937	https://maps.google.com/?q=-25.4591774481,-56.4425939608
COV03	4433	4191	3839	3148	https://maps.google.com/?q=-25.4565154129,-56.4444863483
COV03	4365	4135	3780	3100	https://maps.google.com/?q=-25.4568983872,-56.4448425127
COV03	4358	4125	3774	3086	https://maps.google.com/?q=-25.4560094748,-56.445179118
COV03	4355	4122	3771	3084	https://maps.google.com/?q=-25.4560308388,-56.4451968158
COV03	4343	4111	3761	3073	https://maps.google.com/?q=-25.4559005362,-56.4453282837
COV03	4339	4107	3758	3070	https://maps.google.com/?q=-25.4558758752,-56.445362051
COV03	4269	4049	3697	3022	https://maps.google.com/?q=-25.4554688153,-56.4449830572
COV03	4258	4040	3688	3015	https://maps.google.com/?q=-25.4553960204,-56.445023588
COV03	4300	4072	3724	3038	https://maps.google.com/?q=-25.4556017411,-56.4457374114
COV03	4373	4138	3787	3099	https://maps.google.com/?q=-25.4560288363,-56.4440239081
COV03	4318	4089	3739	3053	https://maps.google.com/?q=-25.4555636966,-56.4435880024
COV03	4118	3922	3567	2918	https://maps.google.com/?q=-25.4543711751,-56.4424973642
COV03	4115	3919	3564	2915	https://maps.google.com/?q=-25.4543535501,-56.4425164074
COV03	3993	3816	3458	2834	https://maps.google.com/?q=-25.4536521376,-56.4424413982
COV03	4209	3991	3645	2965	https://maps.google.com/?q=-25.4547769645,-56.4446408935
COV03	4877	4586	4224	3528	https://maps.google.com/?q=-25.4531583379,-56.4413675119
COV03	4813	4533	4168	3479	https://maps.google.com/?q=-25.4528443622,-56.4410653207
COV03	4567	4330	3955	3299	https://maps.google.com/?q=-25.4517384482,-56.4398951493
COV03	4554	4320	3944	3290	https://maps.google.com/?q=-25.4517859235,-56.43981797
COV03	4854	4565	4203	3507	https://maps.google.com/?q=-25.4530200574,-56.4415537721
COV03	4676	4408	4050	3353	https://maps.google.com/?q=-25.4519519253,-56.4429916603
COV03	4673	4405	4047	3350	https://maps.google.com/?q=-25.4519699357,-56.4430098584
COV03	4642	4378	4020	3324	https://maps.google.com/?q=-25.4517401469,-56.4432778159
COV03	4533	4288	3926	3245	https://maps.google.com/?q=-25.4523276025,-56.4438041766
COV03	4531	4286	3924	3244	https://maps.google.com/?q=-25.4523251358,-56.443817937
COV03	4528	4284	3922	3242	https://maps.google.com/?q=-25.4523535436,-56.4438275231
COV03	4562	4312	3951	3266	https://maps.google.com/?q=-25.4513129525,-56.4428900082
COV03	4448	4217	3852	3185	https://maps.google.com/?q=-25.4506914572,-56.442325715

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV03	4612	4350	3994	3298	https://maps.google.com/?q=-25.4515492308,-56.4435410147
COV03	5706	5372	4942	4419	https://maps.google.com/?q=-25.4556429994,-56.4380746825
COV03	5615	5312	4863	4367	https://maps.google.com/?q=-25.4557683334,-56.4395883333
COV03	5559	5284	4814	4357	https://maps.google.com/?q=-25.4591840842,-56.4370637654
COV03	5499	5234	4763	4305	https://maps.google.com/?q=-25.4592863713,-56.4367614587
COV03	5345	5102	4629	4170	https://maps.google.com/?q=-25.4585557827,-56.4365139612
COV03	5302	5066	4592	4133	https://maps.google.com/?q=-25.4597204324,-56.4357774801
COV03	4957	4768	4293	3843	https://maps.google.com/?q=-25.4607203805,-56.4347263252
COV03	5209	4986	4511	4054	https://maps.google.com/?q=-25.4599307815,-56.4353006273
COV03	7018	6709	6078	6215	https://maps.google.com/?q=-25.4630808383,-56.4448674115
COV03	6701	6390	5803	5773	https://maps.google.com/?q=-25.4620305263,-56.4462610043
COV03	6591	6281	5708	5627	https://maps.google.com/?q=-25.4616506447,-56.4467650348
COV03	6419	6115	5559	5407	https://maps.google.com/?q=-25.4610561729,-56.4475794833
COV05	9084	12880	7867	12566	https://maps.google.com/?q=-25.4728752181,-56.4479182614
COV05	8432	9150	7302	9386	https://maps.google.com/?q=-25.4703601249,-56.450157674
COV05	8431	9146	7301	9381	https://maps.google.com/?q=-25.4703531605,-56.4501520364
COV05	8356	8924	7237	9113	https://maps.google.com/?q=-25.4706418124,-56.4497224807
COV05	8319	8820	7205	8985	https://maps.google.com/?q=-25.4707858252,-56.4495082299
COV05	8316	8811	7202	8973	https://maps.google.com/?q=-25.4708034411,-56.4495231002
COV05	8294	8751	7183	8898	https://maps.google.com/?q=-25.470888755,-56.4493627403
COV05	8242	8615	7138	8726	https://maps.google.com/?q=-25.4705555596,-56.4493425364
COV05	8324	8832	7208	9000	https://maps.google.com/?q=-25.4699474916,-56.4507771408
COV05	8194	8494	7096	8567	https://maps.google.com/?q=-25.4693932499,-56.4515124193
COV05	7668	7714	6641	7632	https://maps.google.com/?q=-25.4705967711,-56.4516831268
COV05	7918	7887	6857	7744	https://maps.google.com/?q=-25.4681977128,-56.4531561604
COV05	7563	7256	6550	6838	https://maps.google.com/?q=-25.469155994,-56.4549849064
COV05	7383	7080	6394	6594	https://maps.google.com/?q=-25.4696959634,-56.4553550179
COV05	7456	7116	6457	6592	https://maps.google.com/?q=-25.4687447338,-56.455787093
COV05	7045	6735	6101	6082	https://maps.google.com/?q=-25.4700034447,-56.4566048809
COV05	6584	6322	5702	5569	https://maps.google.com/?q=-25.4714168557,-56.4575126502
COV05	0	0	0	5384	https://maps.google.com/?q=-25.4717146419,-56.4568855354
COV05	6378	6138	5523	5354	https://maps.google.com/?q=-25.4720616989,-56.4579362796
COV05	0	0	0	4569	https://maps.google.com/?q=-25.4718083174,-56.4598612787
COV05	7396	7040	6405	6460	https://maps.google.com/?q=-25.4684867213,-56.456227557
COV05	6753	6315	5848	5234	https://maps.google.com/?q=-25.4660753027,-56.4586826549
COV05	6608	6166	5723	4998	https://maps.google.com/?q=-25.465436682,-56.4586316016
COV05	6334	5890	5486	4585	https://maps.google.com/?q=-25.4639796214,-56.4609611036
COV05	6142	5701	5319	4316	https://maps.google.com/?q=-25.463237352,-56.463086036
COV05	6126	5685	5305	4294	https://maps.google.com/?q=-25.4631680386,-56.4632716814
COV05	6120	5680	5300	4287	https://maps.google.com/?q=-25.4632207199,-56.4632968856
COV05	6001	5565	5197	4126	https://maps.google.com/?q=-25.4644485904,-56.4637711455
COV05	6329	5885	5481	4577	https://maps.google.com/?q=-25.4639309284,-56.460939861
COV05	6351	5907	5500	4609	https://maps.google.com/?q=-25.4634965514,-56.456759335
COV05	5524	5109	4784	3558	https://maps.google.com/?q=-25.4559983334,-56.44987
COV05	5515	5102	4777	3549	https://maps.google.com/?q=-25.4560633334,-56.449775
COV05	5178	4785	4485	3192	https://maps.google.com/?q=-25.4522066668,-56.4464316667
COV05	5120	4731	4434	3134	https://maps.google.com/?q=-25.4527600001,-56.44567
COV05	5025	4642	4352	3040	https://maps.google.com/?q=-25.4504029885,-56.444713827

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV05	4904	4530	4247	2925	https://maps.google.com/?q=-25.448915219,-56.4432839081
COV05	4882	4509	4228	2903	https://maps.google.com/?q=-25.4491500001,-56.4429566667
COV05	4475	4132	3876	2542	https://maps.google.com/?q=-25.44287705,-56.4378064639
COV05	4429	4090	3836	2504	https://maps.google.com/?q=-25.4434128963,-56.436981338
COV05	4326	4002	3746	2450	https://maps.google.com/?q=-25.4441681418,-56.4360232217
COV05	4266	3951	3694	2419	https://maps.google.com/?q=-25.4436499982,-56.4355252583
COV05	4251	3939	3682	2411	https://maps.google.com/?q=-25.4435347934,-56.4356668646
COV05	4309	3989	3732	2443	https://maps.google.com/?q=-25.4442639074,-56.4361191045
COV05	4379	4044	3792	2462	https://maps.google.com/?q=-25.4426255939,-56.4362502643
COV05	4291	3974	3716	2425	https://maps.google.com/?q=-25.4421876546,-56.4368334312
COV05	4353	4019	3769	2440	https://maps.google.com/?q=-25.4422019064,-56.4358535526
COV05	4319	3992	3740	2426	https://maps.google.com/?q=-25.4423533334,-56.435615
COV05	4346	4013	3763	2434	https://maps.google.com/?q=-25.4420913216,-56.4357500092
COV05	4334	4002	3753	2425	https://maps.google.com/?q=-25.4422306194,-56.435526017
COV05	4320	3991	3741	2419	https://maps.google.com/?q=-25.4422866668,-56.4354233333
COV05	4340	4007	3758	2430	https://maps.google.com/?q=-25.4419999721,-56.4356644765
COV05	4280	3952	3707	2381	https://maps.google.com/?q=-25.441026393,-56.4347529025
COV05	4226	3909	3659	2359	https://maps.google.com/?q=-25.4407478148,-56.4351293048
COV05	4193	3883	3631	2345	https://maps.google.com/?q=-25.4414787052,-56.4341582891
COV05	4140	3841	3585	2323	https://maps.google.com/?q=-25.441759523,-56.4337891196
COV05	4086	3797	3538	2301	https://maps.google.com/?q=-25.4420970556,-56.434120537
COV05	4077	3790	3530	2297	https://maps.google.com/?q=-25.4420459082,-56.4341839846
COV05	3899	3646	3376	2223	https://maps.google.com/?q=-25.4430850999,-56.4320464463
COV05	3838	3596	3324	2198	https://maps.google.com/?q=-25.4435015695,-56.4324334824
COV05	3762	3533	3258	2166	https://maps.google.com/?q=-25.4438833759,-56.4309969584
COV05	3730	3507	3231	2153	https://maps.google.com/?q=-25.4440701918,-56.4307516662
COV05	3653	3443	3164	2120	https://maps.google.com/?q=-25.444657166,-56.4317331742
COV05	3492	3308	3024	2052	https://maps.google.com/?q=-25.4456652112,-56.4303491936
COV05	3597	3396	3115	2096	https://maps.google.com/?q=-25.4450762327,-56.432131897
COV05	3606	3403	3123	2100	https://maps.google.com/?q=-25.4430618524,-56.4298975348
COV05	3465	3286	3001	2041	https://maps.google.com/?q=-25.4438901544,-56.4286352357
COV05	4226	3902	3660	2338	https://maps.google.com/?q=-25.4401117312,-56.4339156606
COV05	4169	3857	3610	2314	https://maps.google.com/?q=-25.4404095324,-56.4335112244
COV05	4073	3780	3527	2275	https://maps.google.com/?q=-25.4409156009,-56.4328244934
COV05	4038	3753	3497	2261	https://maps.google.com/?q=-25.4411066668,-56.4325766667
COV05	3993	3716	3458	2243	https://maps.google.com/?q=-25.4404019843,-56.4323285621
COV05	3985	3709	3451	2239	https://maps.google.com/?q=-25.4403566668,-56.432395
COV05	4176	3862	3616	2317	https://maps.google.com/?q=-25.4398545539,-56.4342713637
COV05	4173	3860	3614	2316	https://maps.google.com/?q=-25.4398389134,-56.4342929961
COV05	4171	3859	3612	2315	https://maps.google.com/?q=-25.4398278019,-56.4342846147
COV05	4170	3858	3611	2315	https://maps.google.com/?q=-25.4398245111,-56.4343129159
COV05	3974	3701	3442	2235	https://maps.google.com/?q=-25.4387880841,-56.4357463739
COV05	3908	3647	3385	2208	https://maps.google.com/?q=-25.4384230467,-56.4362464872
COV05	3909	3648	3385	2208	https://maps.google.com/?q=-25.4392139811,-56.4361774252
COV05	3892	3634	3370	2201	https://maps.google.com/?q=-25.4393145755,-56.4360531016
COV05	4168	3848	3609	2291	https://maps.google.com/?q=-25.4390907409,-56.4330101757
COV05	4154	3836	3598	2281	https://maps.google.com/?q=-25.4388613315,-56.4327924878
COV05	4112	3797	3561	2248	https://maps.google.com/?q=-25.4381095879,-56.4320791624

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV05	4103	3790	3553	2244	https://maps.google.com/?q=-25.4380628762,-56.4321392621
COV05	4079	3767	3533	2223	https://maps.google.com/?q=-25.4375326621,-56.4315317288
COV05	4048	3738	3506	2198	https://maps.google.com/?q=-25.4370262086,-56.4309232411
COV05	4018	3710	3479	2175	https://maps.google.com/?q=-25.4365345185,-56.4303261111
COV05	4010	3712	3473	2195	https://maps.google.com/?q=-25.4374287765,-56.4321550583
COV05	3934	3651	3407	2165	https://maps.google.com/?q=-25.4370555523,-56.4327858491
COV05	3763	3512	3259	2098	https://maps.google.com/?q=-25.4361910626,-56.4342469042
COV05	3711	3470	3213	2077	https://maps.google.com/?q=-25.4359185036,-56.4347075418
COV05	3590	3370	3109	2029	https://maps.google.com/?q=-25.4352334533,-56.4355463666
COV05	3552	3339	3076	2014	https://maps.google.com/?q=-25.4349401956,-56.4352777965
COV05	3538	3327	3064	2008	https://maps.google.com/?q=-25.4348301386,-56.4351735421
COV05	3552	3339	3076	2014	https://maps.google.com/?q=-25.4349365164,-56.4352836322
COV05	3588	3369	3108	2029	https://maps.google.com/?q=-25.4349536587,-56.4339082297
COV05	4066	3768	3521	2251	https://maps.google.com/?q=-25.4387030072,-56.4337888388
COV05	4397	4060	3808	2477	https://maps.google.com/?q=-25.4439226088,-56.4374420335
COV05	4388	4051	3800	2469	https://maps.google.com/?q=-25.444076288,-56.4375788939
COV05	4470	4128	3871	2538	https://maps.google.com/?q=-25.44281728,-56.4378985153
COV05	4453	4113	3857	2529	https://maps.google.com/?q=-25.442705298,-56.4380549031
COV05	4430	4095	3836	2519	https://maps.google.com/?q=-25.4428383335,-56.438185
COV05	4409	4076	3819	2506	https://maps.google.com/?q=-25.4423983278,-56.438461346
COV05	4380	4051	3793	2490	https://maps.google.com/?q=-25.4421829561,-56.4387332345
COV05	4324	4007	3745	2466	https://maps.google.com/?q=-25.4425216668,-56.4390233333
COV05	4318	3999	3740	2458	https://maps.google.com/?q=-25.4418387873,-56.4393865756
COV05	4281	3969	3707	2442	https://maps.google.com/?q=-25.4420540487,-56.4391669044
COV05	4275	3964	3702	2439	https://maps.google.com/?q=-25.4420902548,-56.4391932464
COV05	4260	3949	3689	2427	https://maps.google.com/?q=-25.4414100012,-56.4399516671
COV05	4181	3882	3621	2386	https://maps.google.com/?q=-25.4408083682,-56.4407321986
COV05	4136	3843	3582	2362	https://maps.google.com/?q=-25.44122507,-56.4411210819
COV05	4087	3800	3539	2337	https://maps.google.com/?q=-25.441687657,-56.4415530404
COV05	3935	3678	3408	2271	https://maps.google.com/?q=-25.4408874004,-56.4426900291
COV05	4013	3741	3475	2305	https://maps.google.com/?q=-25.4421026649,-56.4410352216
COV05	4007	3736	3470	2303	https://maps.google.com/?q=-25.4421331154,-56.4410788865
COV05	3873	3627	3354	2245	https://maps.google.com/?q=-25.4428732925,-56.4399824324
COV05	3884	3636	3364	2250	https://maps.google.com/?q=-25.4429583334,-56.4416933333
COV05	3877	3630	3358	2247	https://maps.google.com/?q=-25.4429978446,-56.4416407046
COV05	3872	3627	3353	2245	https://maps.google.com/?q=-25.4430341973,-56.4416671546
COV05	3816	3580	3304	2220	https://maps.google.com/?q=-25.4433333334,-56.4411533333
COV05	4082	3797	3535	2334	https://maps.google.com/?q=-25.4398858468,-56.4398758672
COV05	3956	3694	3426	2280	https://maps.google.com/?q=-25.4390604098,-56.4390970649
COV05	3756	3531	3253	2194	https://maps.google.com/?q=-25.4402184156,-56.4375738012
COV05	3904	3653	3381	2258	https://maps.google.com/?q=-25.4387126498,-56.4387774683
COV05	3719	3500	3221	2178	https://maps.google.com/?q=-25.4374105953,-56.4375808825
COV05	3666	3456	3175	2155	https://maps.google.com/?q=-25.4377402796,-56.437161289
COV05	3708	3491	3212	2173	https://maps.google.com/?q=-25.4373467813,-56.4376661232
COV05	3664	3455	3173	2154	https://maps.google.com/?q=-25.437077443,-56.4380258949
COV05	3608	3408	3125	2130	https://maps.google.com/?q=-25.4367576735,-56.4385079141
COV05	3561	3369	3084	2109	https://maps.google.com/?q=-25.437136444,-56.4388079444
COV05	3301	3148	2859	1994	https://maps.google.com/?q=-25.4341174154,-56.4376679308

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV05	3004	2892	2602	1859	https://maps.google.com/?q=-25.4308859034,-56.435972514
COV05	2904	2805	2515	1812	https://maps.google.com/?q=-25.4303233334,-56.4373116667
COV05	2757	2675	2387	1742	https://maps.google.com/?q=-25.4291100001,-56.4384933333
COV05	2965	2858	2567	1840	https://maps.google.com/?q=-25.4304065278,-56.4357366608
COV05	2793	2707	2418	1759	https://maps.google.com/?q=-25.428237109,-56.4345890613
COV05	2715	2638	2351	1722	https://maps.google.com/?q=-25.4287188677,-56.433434178
COV05	0	0	0	1725	https://maps.google.com/?q=-25.4277304004,-56.4355875376
COV05	2687	2613	2327	1708	https://maps.google.com/?q=-25.4267838617,-56.4338173899
COV05	2551	2492	2209	1642	https://maps.google.com/?q=-25.4248334128,-56.4326313055
COV05	0	0	0	1562	https://maps.google.com/?q=-25.4233479657,-56.4353496161
COV05	0	0	0	1530	https://maps.google.com/?q=-25.4244516674,-56.4360399998
COV05	0	0	0	1449	https://maps.google.com/?q=-25.4238133334,-56.4391616667
COV05	0	0	0	1545	https://maps.google.com/?q=-25.4230962333,-56.4360085391
COV05	0	0	0	1460	https://maps.google.com/?q=-25.4207789741,-56.4354298354
COV05	0	0	0	1433	https://maps.google.com/?q=-25.4198329653,-56.434648969
COV05	0	0	0	1419	https://maps.google.com/?q=-25.4194650001,-56.435205
COV05	0	0	0	1386	https://maps.google.com/?q=-25.4181253887,-56.4332328086
COV05	2385	2342	2066	1558	https://maps.google.com/?q=-25.4222649522,-56.4308990047
COV05	2343	2304	2029	1537	https://maps.google.com/?q=-25.4214992574,-56.430513765
COV05	2192	2166	1898	1458	https://maps.google.com/?q=-25.4186723543,-56.4288309997
COV05	1920	1914	1663	1311	https://maps.google.com/?q=-25.4147392887,-56.4303210701
COV05	1917	1911	1660	1310	https://maps.google.com/?q=-25.4146883784,-56.4302712419
COV05	1915	1909	1658	1309	https://maps.google.com/?q=-25.414742877,-56.430210294
COV05	1860	1858	1611	1278	https://maps.google.com/?q=-25.4133866668,-56.429055
COV05	1859	1857	1610	1277	https://maps.google.com/?q=-25.4133570926,-56.4290948913
COV05	0	0	0	1422	https://maps.google.com/?q=-25.4172047984,-56.4280908698
COV05	0	0	0	1289	https://maps.google.com/?q=-25.411985982,-56.4278586737
COV05	0	0	0	1255	https://maps.google.com/?q=-25.410491458,-56.4265560406
COV05	0	0	0	1233	https://maps.google.com/?q=-25.409513685,-56.4257021142
COV05	0	0	0	1221	https://maps.google.com/?q=-25.4092333334,-56.4263883333
COV05	0	0	0	1179	https://maps.google.com/?q=-25.4080783342,-56.4289599997
COV05	0	0	0	1213	https://maps.google.com/?q=-25.4085797946,-56.4248930926
COV05	0	0	0	1189	https://maps.google.com/?q=-25.4079426166,-56.4264017997
COV05	0	0	0	1153	https://maps.google.com/?q=-25.406954522,-56.4286852322
COV05	0	0	0	1113	https://maps.google.com/?q=-25.4057700012,-56.4314399999
COV05	0	0	0	1103	https://maps.google.com/?q=-25.4053783334,-56.431825
COV05	0	0	0	1184	https://maps.google.com/?q=-25.4071774384,-56.4236597467
COV05	2383	2340	2064	1557	https://maps.google.com/?q=-25.4222380353,-56.4309439512
COV05	4079	3794	3533	2333	https://maps.google.com/?q=-25.4398615144,-56.4399072208
COV05	4028	3750	3489	2306	https://maps.google.com/?q=-25.4394439764,-56.4404415761
COV05	3979	3708	3446	2280	https://maps.google.com/?q=-25.439026748,-56.4409750741
COV05	3923	3660	3398	2251	https://maps.google.com/?q=-25.4385506451,-56.4415849347
COV05	3820	3576	3309	2207	https://maps.google.com/?q=-25.4392633334,-56.44225
COV05	3869	3616	3351	2228	https://maps.google.com/?q=-25.4381742889,-56.4412461493
COV05	3851	3601	3335	2221	https://maps.google.com/?q=-25.4380766668,-56.4413933333
COV05	3833	3582	3320	2204	https://maps.google.com/?q=-25.4377537134,-56.4426048555
COV05	3774	3533	3268	2179	https://maps.google.com/?q=-25.4373900918,-56.4430638828
COV05	3734	3500	3234	2162	https://maps.google.com/?q=-25.4371409862,-56.4433834104

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV05	3625	3411	3140	2115	https://maps.google.com/?q=-25.4363263859,-56.4426417175
COV05	3550	3348	3074	2083	https://maps.google.com/?q=-25.4368298204,-56.4420160384
COV05	3544	3343	3069	2080	https://maps.google.com/?q=-25.4367841598,-56.4419708531
COV05	3579	3372	3099	2095	https://maps.google.com/?q=-25.435965218,-56.4423128787
COV05	3424	3243	2965	2028	https://maps.google.com/?q=-25.4347221844,-56.4411800848
COV05	3401	3224	2946	2018	https://maps.google.com/?q=-25.4348515573,-56.4409542707
COV05	3386	3211	2932	2011	https://maps.google.com/?q=-25.434726638,-56.4408275345
COV05	3375	3202	2923	2007	https://maps.google.com/?q=-25.4350044564,-56.4406873915
COV05	3402	3224	2946	2018	https://maps.google.com/?q=-25.434590699,-56.4413998526
COV05	3347	3177	2898	1994	https://maps.google.com/?q=-25.4340492876,-56.4411033631
COV05	3223	3072	2791	1939	https://maps.google.com/?q=-25.4346733334,-56.4397
COV05	3277	3118	2838	1963	https://maps.google.com/?q=-25.4333458194,-56.4407181318
COV05	3205	3057	2775	1931	https://maps.google.com/?q=-25.4325850043,-56.4403160101
COV05	3177	3033	2752	1919	https://maps.google.com/?q=-25.432610572,-56.4406756442
COV05	3052	2925	2643	1863	https://maps.google.com/?q=-25.4319383336,-56.4422233333
COV05	3173	3030	2748	1917	https://maps.google.com/?q=-25.4322559523,-56.4401169234
COV05	3297	3135	2855	1972	https://maps.google.com/?q=-25.434091244,-56.4425638862
COV05	3290	3129	2849	1969	https://maps.google.com/?q=-25.4340270665,-56.4425245598
COV05	3264	3108	2827	1958	https://maps.google.com/?q=-25.433925513,-56.4429262449
COV05	3056	2929	2646	1864	https://maps.google.com/?q=-25.432786162,-56.4454172698
COV05	2895	2790	2507	1791	https://maps.google.com/?q=-25.4311246949,-56.4452781958
COV05	2795	2702	2420	1744	https://maps.google.com/?q=-25.430362374,-56.4462525233
COV05	3011	2890	2608	1844	https://maps.google.com/?q=-25.4325257406,-56.4459866234
COV05	3644	3426	3156	2123	https://maps.google.com/?q=-25.4366009665,-56.444135005
COV05	3833	3581	3319	2204	https://maps.google.com/?q=-25.4377605894,-56.442611056
COV05	3745	3504	3243	2158	https://maps.google.com/?q=-25.4387210972,-56.4434772083
COV05	3735	3497	3235	2154	https://maps.google.com/?q=-25.4386607188,-56.4435544202
COV05	3644	3421	3155	2115	https://maps.google.com/?q=-25.4380760022,-56.4443021498
COV05	3641	3419	3153	2114	https://maps.google.com/?q=-25.4380961493,-56.444320807
COV05	3608	3392	3125	2100	https://maps.google.com/?q=-25.4383423905,-56.4445563846
COV05	3500	3302	3031	2053	https://maps.google.com/?q=-25.438586667,-56.4453933334
COV05	3603	3388	3120	2097	https://maps.google.com/?q=-25.4383066912,-56.4445995083
COV05	3556	3349	3079	2077	https://maps.google.com/?q=-25.4374982515,-56.4450422733
COV05	3433	3247	2973	2024	https://maps.google.com/?q=-25.4366470352,-56.4461044507
COV05	3400	3218	2944	2010	https://maps.google.com/?q=-25.43640717,-56.4464046558
COV05	3254	3095	2818	1946	https://maps.google.com/?q=-25.4382075807,-56.4474973226
COV05	3229	3074	2796	1935	https://maps.google.com/?q=-25.4384371672,-56.4477056594
COV05	3187	3038	2760	1916	https://maps.google.com/?q=-25.4381133334,-56.4481216667
COV05	3188	3039	2761	1916	https://maps.google.com/?q=-25.4388024187,-56.4480616488
COV05	3725	3487	3226	2147	https://maps.google.com/?q=-25.4389453397,-56.443686272
COV05	3594	3373	3113	2079	https://maps.google.com/?q=-25.4404401358,-56.4450772851
COV05	3525	3315	3052	2050	https://maps.google.com/?q=-25.4408941608,-56.4444604258
COV05	3463	3264	2999	2023	https://maps.google.com/?q=-25.4413397089,-56.4442505143
COV05	3537	3322	3063	2049	https://maps.google.com/?q=-25.441130645,-56.4457205504
COV05	3536	3322	3062	2049	https://maps.google.com/?q=-25.4411372864,-56.4457266426
COV06	9084	12880	7867	12566	https://maps.google.com/?q=-25.4729302481,-56.4482030913
COV06	8639	9923	7482	10242	https://maps.google.com/?q=-25.4712578456,-56.4493535023
COV06	8637	9916	7480	10236	https://maps.google.com/?q=-25.4712575435,-56.4493642971

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV06	8569	9648	7421	9952	https://maps.google.com/?q=-25.4708257981,-56.4493402302
COV06	8526	9493	7384	9783	https://maps.google.com/?q=-25.4705556494,-56.4493320666
COV06	8496	9391	7358	9668	https://maps.google.com/?q=-25.4703666668,-56.4493333333
COV06	8473	9335	7338	9604	https://maps.google.com/?q=-25.4702666668,-56.4493683333
COV06	8305	8801	7192	8963	https://maps.google.com/?q=-25.4691388692,-56.4496819757
COV06	7907	8061	6848	8039	https://maps.google.com/?q=-25.4672581079,-56.4502530398
COV06	7827	7942	6778	7893	https://maps.google.com/?q=-25.4672591894,-56.4499482984
COV06	7789	7861	6745	7784	https://maps.google.com/?q=-25.466785622,-56.4506653663
COV06	7679	7684	6650	7558	https://maps.google.com/?q=-25.4664565797,-56.4511848878
COV06	7467	7359	6467	7141	https://maps.google.com/?q=-25.4664352883,-56.4524640818
COV06	7425	7296	6430	7060	https://maps.google.com/?q=-25.4664273193,-56.4527304722
COV06	7374	7222	6386	6965	https://maps.google.com/?q=-25.4667178013,-56.4527194306
COV06	7388	7242	6398	6991	https://maps.google.com/?q=-25.4664215214,-56.4529623488
COV06	7275	7079	6300	6783	https://maps.google.com/?q=-25.4664061328,-56.4536906067
COV06	7245	7038	6274	6730	https://maps.google.com/?q=-25.4664177898,-56.4538826489
COV06	7149	6905	6192	6561	https://maps.google.com/?q=-25.4664124115,-56.4545163885
COV06	7100	6837	6149	6474	https://maps.google.com/?q=-25.4664003655,-56.4548520771
COV06	6922	6621	5994	6175	https://maps.google.com/?q=-25.4663558805,-56.4560871611
COV06	6760	6442	5855	5916	https://maps.google.com/?q=-25.4663127457,-56.4572581587
COV06	0	0	0	5404	https://maps.google.com/?q=-25.4674967678,-56.4580378798
COV06	0	0	0	5261	https://maps.google.com/?q=-25.4672928233,-56.4583971899
COV06	0	0	0	5213	https://maps.google.com/?q=-25.4673174556,-56.4585355341
COV06	6363	6021	5510	5321	https://maps.google.com/?q=-25.4663118444,-56.4603670611
COV06	6316	5973	5470	5255	https://maps.google.com/?q=-25.4663085643,-56.4607560441
COV06	6149	5803	5325	5025	https://maps.google.com/?q=-25.466295929,-56.4621880982
COV06	5966	5619	5167	4782	https://maps.google.com/?q=-25.4663058641,-56.4638472672
COV06	5829	5484	5048	4608	https://maps.google.com/?q=-25.4664915072,-56.4651311097
COV06	5748	5417	4978	4530	https://maps.google.com/?q=-25.4666733368,-56.4647264599
COV06	5742	5398	4972	4499	https://maps.google.com/?q=-25.4666271179,-56.465980458
COV06	5708	5364	4943	4457	https://maps.google.com/?q=-25.4666824945,-56.4663174201
COV06	5634	5304	4879	4389	https://maps.google.com/?q=-25.466305514,-56.4663959271
COV06	5588	5247	4839	4312	https://maps.google.com/?q=-25.4668868016,-56.4675309129
COV06	5640	5314	4884	4404	https://maps.google.com/?q=-25.466139088,-56.4659125702
COV06	5288	5020	4579	4090	https://maps.google.com/?q=-25.4644408848,-56.4650860383
COV06	5115	4874	4430	3943	https://maps.google.com/?q=-25.464897554,-56.4643518326
COV06	4959	4741	4294	3814	https://maps.google.com/?q=-25.46277158,-56.4642774217
COV06	4863	4660	4212	3735	https://maps.google.com/?q=-25.462988848,-56.4637175942
COV06	5874	5543	5087	4692	https://maps.google.com/?q=-25.4667116649,-56.4640591066
COV06	5462	5196	4730	4306	https://maps.google.com/?q=-25.4684767894,-56.4651937149
COV06	0	0	0	3980	https://maps.google.com/?q=-25.4701452478,-56.4662961242
COV06	0	0	0	3749	https://maps.google.com/?q=-25.47149593,-56.4671204042
COV06	0	0	0	3646	https://maps.google.com/?q=-25.4721337733,-56.4675209201
COV06	0	0	0	3367	https://maps.google.com/?q=-25.4734529197,-56.466332004
COV06	0	0	0	3552	https://maps.google.com/?q=-25.4727402156,-56.4679269382
COV06	0	0	0	3228	https://maps.google.com/?q=-25.4751520259,-56.4692473541
COV06	0	0	0	3084	https://maps.google.com/?q=-25.476421221,-56.4697616188
COV06	0	0	0	3053	https://maps.google.com/?q=-25.4767106234,-56.4698788832
COV06	0	0	0	2508	https://maps.google.com/?q=-25.4778798699,-56.4643573086

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV06	0	0	0	3018	https://maps.google.com/?q=-25.4770465793,-56.4699643749
COV06	0	0	0	2952	https://maps.google.com/?q=-25.4777346543,-56.4700413446
COV06	0	0	0	2947	https://maps.google.com/?q=-25.4777316993,-56.4700956041
COV06	0	0	0	2701	https://maps.google.com/?q=-25.4806080174,-56.4703619785
COV06	6105	5766	5287	4979	https://maps.google.com/?q=-25.4665012485,-56.4621879333
COV06	0	0	0	4628	https://maps.google.com/?q=-25.467775514,-56.4620659271
COV06	6292	5952	5449	5229	https://maps.google.com/?q=-25.4664055322,-56.4608090925
COV06	6007	5707	5202	4928	https://maps.google.com/?q=-25.4676018674,-56.4613299897
COV06	5928	5640	5134	4849	https://maps.google.com/?q=-25.4678350753,-56.4616283492
COV06	4989	4822	4320	3978	https://maps.google.com/?q=-25.4720385173,-56.4633619075
COV06	6206	5878	5375	5136	https://maps.google.com/?q=-25.4664316668,-56.4603833333
COV06	6152	5832	5327	5078	https://maps.google.com/?q=-25.4666688473,-56.4604525938
COV06	6179	5855	5352	5107	https://maps.google.com/?q=-25.4663127609,-56.4603671721
COV06	7016	6742	6076	6360	https://maps.google.com/?q=-25.4661115229,-56.4546958317
COV06	6780	6515	5872	6051	https://maps.google.com/?q=-25.4660690327,-56.4556892647
COV06	6807	6540	5895	6085	https://maps.google.com/?q=-25.4655321807,-56.4544642604
COV06	7095	6835	6144	6484	https://maps.google.com/?q=-25.4666083581,-56.4544375628
COV06	7160	6926	6201	6607	https://maps.google.com/?q=-25.4660965462,-56.4538897417
COV06	7107	6858	6155	6533	https://maps.google.com/?q=-25.4658983894,-56.453879588
COV06	7307	7134	6328	6869	https://maps.google.com/?q=-25.4661271806,-56.4529092604
COV06	7467	7359	6467	7141	https://maps.google.com/?q=-25.4664352529,-56.4524640832
COV06	7430	7303	6434	7069	https://maps.google.com/?q=-25.4662217669,-56.452472764
COV06	7364	7214	6377	6968	https://maps.google.com/?q=-25.466152484,-56.4526821418
COV06	6907	6604	5981	6151	https://maps.google.com/?q=-25.4641973438,-56.4508771516
COV06	6772	6455	5865	5934	https://maps.google.com/?q=-25.4647769689,-56.4501435397
COV06	6724	6403	5823	5860	https://maps.google.com/?q=-25.4649360472,-56.4498365149
COV06	6639	6311	5750	5729	https://maps.google.com/?q=-25.4643906713,-56.4496049772
COV06	6614	6284	5727	5690	https://maps.google.com/?q=-25.4643838473,-56.4494075937
COV06	6497	6160	5626	5515	https://maps.google.com/?q=-25.4634471663,-56.4492044203
COV06	6485	6151	5617	5502	https://maps.google.com/?q=-25.463430514,-56.4492542604
COV06	6451	6113	5587	5448	https://maps.google.com/?q=-25.463137948,-56.4490731442
COV06	6409	6069	5550	5387	https://maps.google.com/?q=-25.4628473073,-56.4489497588
COV06	6330	6000	5482	5299	https://maps.google.com/?q=-25.4630504941,-56.4486388404
COV06	6238	5921	5402	5199	https://maps.google.com/?q=-25.4632874539,-56.4482769506
COV06	6287	5963	5444	5251	https://maps.google.com/?q=-25.463215514,-56.4487459271
COV06	6263	5919	5424	5181	https://maps.google.com/?q=-25.4618260088,-56.4484974194
COV06	6119	5772	5299	4984	https://maps.google.com/?q=-25.4607659334,-56.4480385122
COV06	6056	5709	5245	4901	https://maps.google.com/?q=-25.4610561729,-56.4475794833
COV06	6069	5722	5256	4918	https://maps.google.com/?q=-25.4606249064,-56.4484571289
COV06	6026	5686	5219	4874	https://maps.google.com/?q=-25.4605559747,-56.4486697165
COV06	5879	5562	5091	4726	https://maps.google.com/?q=-25.4602349749,-56.4493176454
COV06	5771	5471	4998	4622	https://maps.google.com/?q=-25.4598527666,-56.4489310832
COV06	5478	5222	4744	4348	https://maps.google.com/?q=-25.4591015467,-56.4497903597
COV06	5305	5074	4594	4193	https://maps.google.com/?q=-25.4586987883,-56.4506426808
COV06	5259	5034	4554	4152	https://maps.google.com/?q=-25.458545166,-56.4508462803
COV06	5184	4970	4490	4087	https://maps.google.com/?q=-25.4582970188,-56.451175154
COV06	4891	4715	4236	3837	https://maps.google.com/?q=-25.4572813548,-56.4525212064
COV06	4762	4602	4124	3729	https://maps.google.com/?q=-25.4578438474,-56.4530475937

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV06	4691	4540	4063	3671	https://maps.google.com/?q=-25.4565445783,-56.4534976264
COV06	4608	4466	3991	3602	https://maps.google.com/?q=-25.4561623966,-56.4531434718
COV06	4391	4273	3803	3427	https://maps.google.com/?q=-25.4551190413,-56.4521766455
COV06	4339	4227	3757	3385	https://maps.google.com/?q=-25.4548569979,-56.4519338263
COV06	4147	4055	3591	3232	https://maps.google.com/?q=-25.4542595222,-56.453210366
COV06	4134	4044	3580	3223	https://maps.google.com/?q=-25.4542260208,-56.4533009211
COV06	4105	4017	3555	3199	https://maps.google.com/?q=-25.45405603,-56.4529707573
COV06	4277	4171	3704	3335	https://maps.google.com/?q=-25.4545410062,-56.4516410183
COV06	4261	4157	3690	3323	https://maps.google.com/?q=-25.4546288474,-56.451575927
COV06	4252	4149	3682	3316	https://maps.google.com/?q=-25.4544120253,-56.4515215012
COV06	4039	3957	3498	3147	https://maps.google.com/?q=-25.4532552264,-56.4504495953
COV06	4010	3931	3473	3125	https://maps.google.com/?q=-25.4530943598,-56.4502971613
COV06	3982	3906	3448	3103	https://maps.google.com/?q=-25.45293312,-56.4501467725
COV06	3965	3891	3434	3090	https://maps.google.com/?q=-25.4528376947,-56.4500565517
COV06	3938	3866	3411	3069	https://maps.google.com/?q=-25.4526990513,-56.4502250096
COV06	4000	3922	3464	3117	https://maps.google.com/?q=-25.4530271832,-56.4503425942
COV06	3619	3574	3134	2821	https://maps.google.com/?q=-25.4512111398,-56.4534208684
COV06	0	0	0	2725	https://maps.google.com/?q=-25.4520653412,-56.4542501259
COV06	0	0	0	2705	https://maps.google.com/?q=-25.4520990357,-56.4539903019
COV06	0	0	0	2709	https://maps.google.com/?q=-25.4522138487,-56.4543942611
COV06	0	0	0	2622	https://maps.google.com/?q=-25.4530605154,-56.455170928
COV06	3553	3514	3077	2770	https://maps.google.com/?q=-25.4508679718,-56.4539506016
COV06	3411	3383	2954	2662	https://maps.google.com/?q=-25.4501242858,-56.4551751845
COV06	4291	4185	3716	3347	https://maps.google.com/?q=-25.4550414092,-56.4516533083
COV06	4267	4161	3695	3324	https://maps.google.com/?q=-25.4552487399,-56.4518255321
COV06	4619	4476	4000	3611	https://maps.google.com/?q=-25.4562720549,-56.4538704042
COV06	4481	4354	3881	3499	https://maps.google.com/?q=-25.4557396942,-56.4545985977
COV06	4319	4210	3741	3369	https://maps.google.com/?q=-25.455081371,-56.4554990743
COV06	0	0	0	3325	https://maps.google.com/?q=-25.4548492328,-56.455820184
COV06	0	0	0	3291	https://maps.google.com/?q=-25.454668386,-56.4560707302
COV06	0	0	0	3274	https://maps.google.com/?q=-25.4547721814,-56.4561925937
COV06	0	0	0	3245	https://maps.google.com/?q=-25.4544088308,-56.4564191653
COV06	4143	4051	3588	3229	https://maps.google.com/?q=-25.4560533334,-56.4562933333
COV06	0	0	0	3125	https://maps.google.com/?q=-25.4568395286,-56.4569046036
COV06	0	0	0	3053	https://maps.google.com/?q=-25.4564085764,-56.4575138775
COV06	4905	4727	4248	3848	https://maps.google.com/?q=-25.4603370746,-56.4521635973
COV06	4805	4640	4161	3765	https://maps.google.com/?q=-25.4599876649,-56.4526526058
COV06	4568	4417	3956	3535	https://maps.google.com/?q=-25.4586355146,-56.454490927
COV06	4403	4271	3813	3403	https://maps.google.com/?q=-25.4585421807,-56.4553259272
COV06	4797	4633	4155	3758	https://maps.google.com/?q=-25.4608027252,-56.4525965935
COV06	4750	4591	4113	3719	https://maps.google.com/?q=-25.4606297215,-56.4528328715
COV06	4438	4316	3844	3465	https://maps.google.com/?q=-25.4624587302,-56.4541480363
COV06	4372	4256	3786	3411	https://maps.google.com/?q=-25.4627874928,-56.4544560473
COV06	4253	4150	3683	3316	https://maps.google.com/?q=-25.4632984951,-56.4537856903
COV06	4148	4056	3593	3234	https://maps.google.com/?q=-25.4627500416,-56.4532660652
COV06	4145	4053	3590	3231	https://maps.google.com/?q=-25.4627671806,-56.4532459271
COV06	4042	3961	3501	3150	https://maps.google.com/?q=-25.4629151524,-56.4526389893
COV06	4036	3955	3495	3145	https://maps.google.com/?q=-25.4629483264,-56.4526780957

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV06	4097	4010	3548	3193	https://maps.google.com/?q=-25.4640006442,-56.4528645618
COV06	4057	3974	3514	3162	https://maps.google.com/?q=-25.4638039594,-56.4526329401
COV06	4032	3951	3492	3142	https://maps.google.com/?q=-25.4636783334,-56.452485
COV06	4026	3945	3486	3137	https://maps.google.com/?q=-25.4637073098,-56.4524400377
COV06	4007	3928	3470	3122	https://maps.google.com/?q=-25.464425763,-56.4523068167
COV06	4212	4113	3647	3284	https://maps.google.com/?q=-25.4636078052,-56.455224591
COV06	3819	3758	3308	2976	https://maps.google.com/?q=-25.4658380501,-56.4573139705
COV06	4122	4033	3570	3213	https://maps.google.com/?q=-25.4632051351,-56.4557556608
COV06	3975	3900	3443	3098	https://maps.google.com/?q=-25.462525514,-56.4566792604
COV06	3781	3723	3275	2946	https://maps.google.com/?q=-25.4615347175,-56.4579649578
COV06	3658	3610	3168	2851	https://maps.google.com/?q=-25.4608581682,-56.4588362316
COV06	3637	3591	3150	2835	https://maps.google.com/?q=-25.4607396852,-56.4589835567
COV06	3432	3402	2972	2678	https://maps.google.com/?q=-25.4611264058,-56.4604553642
COV06	3302	3281	2860	2578	https://maps.google.com/?q=-25.461330197,-56.4613693774
COV06	3411	3383	2954	2662	https://maps.google.com/?q=-25.461230514,-56.4606459271
COV06	3522	3486	3050	2747	https://maps.google.com/?q=-25.4600839384,-56.4598635844
COV06	3249	3232	2814	2538	https://maps.google.com/?q=-25.4580122906,-56.4579393752
COV06	3395	3368	2940	2649	https://maps.google.com/?q=-25.4592680644,-56.4608410951
COV06	3255	3238	2819	2542	https://maps.google.com/?q=-25.4604055147,-56.4617892605
COV06	3255	3237	2818	2542	https://maps.google.com/?q=-25.4584083641,-56.4620745287
COV06	3120	3111	2702	2439	https://maps.google.com/?q=-25.4593959196,-56.4629389236
COV06	0	0	0	2432	https://maps.google.com/?q=-25.4594438478,-56.4628359273
COV06	3063	3058	2652	2396	https://maps.google.com/?q=-25.4599526293,-56.4633344675
COV06	0	0	0	2365	https://maps.google.com/?q=-25.4603566668,-56.463625
COV06	3215	3201	2785	2512	https://maps.google.com/?q=-25.4580505804,-56.4618319652
COV06	3158	3147	2735	2469	https://maps.google.com/?q=-25.457522741,-56.4614603795
COV06	2939	2941	2545	2302	https://maps.google.com/?q=-25.4560637028,-56.4638563016
COV06	0	0	0	2278	https://maps.google.com/?q=-25.4563948353,-56.4640997414
COV06	0	0	0	2219	https://maps.google.com/?q=-25.4563802308,-56.4649234974
COV06	0	0	0	2210	https://maps.google.com/?q=-25.456250514,-56.4648175939
COV06	0	0	0	2186	https://maps.google.com/?q=-25.4560252613,-56.465445182
COV06	0	0	0	2138	https://maps.google.com/?q=-25.4552489403,-56.4649084741
COV06	0	0	0	2076	https://maps.google.com/?q=-25.455204859,-56.4666489672
COV06	2922	2925	2530	2289	https://maps.google.com/?q=-25.4558839349,-56.4637134302
COV06	2864	2870	2480	2245	https://maps.google.com/?q=-25.4552719307,-56.4632264473
COV06	3123	3114	2704	2442	https://maps.google.com/?q=-25.4571837105,-56.4612217126
COV06	3016	3014	2612	2361	https://maps.google.com/?q=-25.4561232512,-56.4604832551
COV06	0	0	0	2339	https://maps.google.com/?q=-25.4558230814,-56.4602765484
COV06	0	0	0	2273	https://maps.google.com/?q=-25.4549234945,-56.4596033451
COV06	0	0	0	2257	https://maps.google.com/?q=-25.4550738475,-56.4593309272
COV06	0	0	0	2193	https://maps.google.com/?q=-25.4543999847,-56.4625639108
COV06	3625	3581	3140	2826	https://maps.google.com/?q=-25.4604924156,-56.4570675231
COV06	5362	5123	4643	4244	https://maps.google.com/?q=-25.458636962,-56.4494029102
COV06	5275	5048	4569	4167	https://maps.google.com/?q=-25.4582900001,-56.4491
COV06	5017	4825	4345	3944	https://maps.google.com/?q=-25.4572976641,-56.4489034106
COV06	4995	4805	4325	3924	https://maps.google.com/?q=-25.4573771806,-56.4490092604
COV06	4706	4552	4075	3682	https://maps.google.com/?q=-25.4561606525,-56.4503917684
COV06	5342	5105	4626	4226	https://maps.google.com/?q=-25.4585771821,-56.4494942604

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV06	5748	5452	4978	4600	https://maps.google.com/?q=-25.4607091617,-56.4497724432
COV06	5568	5299	4822	4431	https://maps.google.com/?q=-25.4603041548,-56.450630716
COV06	5597	5324	4847	4458	https://maps.google.com/?q=-25.4612690423,-56.450298022
COV06	5233	5012	4532	4130	https://maps.google.com/?q=-25.4624638002,-56.4516227094
COV06	5989	5642	5186	4812	https://maps.google.com/?q=-25.4597704026,-56.4476017407
COV06	5882	5553	5094	4706	https://maps.google.com/?q=-25.4598924319,-56.447936957
COV06	5948	5601	5151	4759	https://maps.google.com/?q=-25.4594496637,-56.4474555895
COV06	5942	5595	5146	4751	https://maps.google.com/?q=-25.4594060953,-56.4474383197
COV06	5927	5583	5133	4736	https://maps.google.com/?q=-25.4593746791,-56.4475144434
COV06	5891	5545	5102	4686	https://maps.google.com/?q=-25.4589994216,-56.4472527599
COV06	5869	5523	5083	4659	https://maps.google.com/?q=-25.4588285254,-56.4471747826
COV06	5770	5426	4997	4534	https://maps.google.com/?q=-25.458016325,-56.4468041914
COV06	5751	5407	4980	4510	https://maps.google.com/?q=-25.4578553332,-56.4467320787
COV06	5735	5393	4966	4495	https://maps.google.com/?q=-25.457916428,-56.4467947701
COV06	5715	5371	4949	4466	https://maps.google.com/?q=-25.4575516078,-56.4465980377
COV06	5657	5324	4899	4412	https://maps.google.com/?q=-25.4573854107,-56.4468739195
COV06	5588	5267	4840	4349	https://maps.google.com/?q=-25.4571550001,-56.44718
COV06	5555	5240	4811	4319	https://maps.google.com/?q=-25.4570366668,-56.44704
COV06	5595	5255	4846	4321	https://maps.google.com/?q=-25.4565161012,-56.4461410501
COV06	5529	5195	4788	4252	https://maps.google.com/?q=-25.4562321561,-56.4465883563
COV06	5506	5174	4768	4228	https://maps.google.com/?q=-25.4561221161,-56.4466908632
COV06	5569	5229	4823	4290	https://maps.google.com/?q=-25.4562814879,-56.4460375122
COV06	5494	5156	4758	4201	https://maps.google.com/?q=-25.4556017411,-56.4457374114
COV06	5361	5028	4643	4048	https://maps.google.com/?q=-25.4543592794,-56.4452012421
COV06	5337	5005	4622	4020	https://maps.google.com/?q=-25.4541291829,-56.4450831869
COV06	5348	5016	4631	4035	https://maps.google.com/?q=-25.4544270855,-56.4451102769
COV06	5309	4982	4598	3997	https://maps.google.com/?q=-25.4542622999,-56.44494199
COV06	5313	4985	4601	4001	https://maps.google.com/?q=-25.4546035915,-56.4448734358
COV06	5279	4955	4572	3968	https://maps.google.com/?q=-25.4547769638,-56.4446408947
COV06	5338	5006	4623	4022	https://maps.google.com/?q=-25.4542063488,-56.4454083962
COV06	5323	4990	4610	3999	https://maps.google.com/?q=-25.4540586105,-56.445230825
COV06	5320	4988	4607	3995	https://maps.google.com/?q=-25.4540333728,-56.4452626802
COV06	5307	4976	4596	3987	https://maps.google.com/?q=-25.454004258,-56.4456821393
COV06	5275	4945	4568	3951	https://maps.google.com/?q=-25.4537905231,-56.4459716533
COV06	5244	4916	4542	3917	https://maps.google.com/?q=-25.4535818637,-56.4462542905
COV06	4988	4707	4320	3708	https://maps.google.com/?q=-25.4547605158,-56.4473492576
COV06	5240	4912	4538	3912	https://maps.google.com/?q=-25.4535550617,-56.4462905948
COV06	5151	4827	4461	3815	https://maps.google.com/?q=-25.4529407929,-56.4471226349
COV06	4914	4634	4255	3625	https://maps.google.com/?q=-25.4540754829,-56.4481539894
COV06	5077	4756	4397	3735	https://maps.google.com/?q=-25.4524150063,-56.4478345366
COV06	5066	4747	4387	3726	https://maps.google.com/?q=-25.4523664482,-56.4477802942
COV06	5059	4739	4381	3715	https://maps.google.com/?q=-25.4522826153,-56.4480112874
COV06	4976	4660	4310	3627	https://maps.google.com/?q=-25.4515425931,-56.4473268513
COV06	4872	4576	4220	3547	https://maps.google.com/?q=-25.4510994848,-56.4478890523
COV06	4900	4588	4243	3547	https://maps.google.com/?q=-25.4508358388,-56.4466731947
COV06	4871	4560	4218	3517	https://maps.google.com/?q=-25.4505628562,-56.4464209154
COV06	4795	4488	4152	3440	https://maps.google.com/?q=-25.4498377976,-56.4457389206
COV06	4775	4469	4135	3420	https://maps.google.com/?q=-25.4496372655,-56.4455664312

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV06	4709	4407	4078	3353	https://maps.google.com/?q=-25.4489767102,-56.4449659401
COV06	4618	4321	3999	3263	https://maps.google.com/?q=-25.4497599143,-56.4439214396
COV06	4634	4337	4013	3279	https://maps.google.com/?q=-25.4482046995,-56.4442641393
COV06	4626	4330	4007	3273	https://maps.google.com/?q=-25.4481696116,-56.4443136902
COV06	4534	4256	3926	3207	https://maps.google.com/?q=-25.4477505152,-56.4449025927
COV06	4418	4162	3827	3126	https://maps.google.com/?q=-25.4471840971,-56.4456109126
COV06	4552	4259	3942	3198	https://maps.google.com/?q=-25.4473217806,-56.4434615314
COV06	4550	4258	3941	3197	https://maps.google.com/?q=-25.4473088913,-56.4434498146
COV06	4521	4229	3915	3168	https://maps.google.com/?q=-25.4475781469,-56.4430898473
COV06	4484	4195	3883	3133	https://maps.google.com/?q=-25.447910365,-56.4426456624
COV06	4468	4182	3870	3120	https://maps.google.com/?q=-25.4480197467,-56.4424994076
COV06	4451	4165	3855	3103	https://maps.google.com/?q=-25.4478194791,-56.4423215261
COV06	4386	4104	3798	3042	https://maps.google.com/?q=-25.4470635294,-56.441650084
COV06	4353	4077	3770	3019	https://maps.google.com/?q=-25.4472253204,-56.4414237177
COV06	4321	4052	3742	2997	https://maps.google.com/?q=-25.4473881832,-56.4412044229
COV06	4295	4030	3719	2980	https://maps.google.com/?q=-25.4475213121,-56.4410252026
COV06	4265	4006	3693	2959	https://maps.google.com/?q=-25.4476758513,-56.4408190306
COV06	4177	3935	3617	2900	https://maps.google.com/?q=-25.4482446236,-56.4411744399
COV06	4226	3975	3660	2933	https://maps.google.com/?q=-25.4474361527,-56.4405968093
COV06	4222	3971	3656	2931	https://maps.google.com/?q=-25.4474120478,-56.4406251898
COV06	4222	3971	3656	2930	https://maps.google.com/?q=-25.4474077067,-56.4405704376
COV06	4229	3977	3662	2935	https://maps.google.com/?q=-25.4478573045,-56.4405690687
COV06	4210	3962	3646	2923	https://maps.google.com/?q=-25.4479861641,-56.44066474
COV06	4311	4044	3734	2991	https://maps.google.com/?q=-25.4473407894,-56.4411395967
COV06	4335	4063	3754	3007	https://maps.google.com/?q=-25.4473339635,-56.4415234698
COV06	4351	4071	3768	3009	https://maps.google.com/?q=-25.4466559523,-56.4412783568
COV06	4307	4030	3730	2968	https://maps.google.com/?q=-25.446147424,-56.4410138041
COV06	4273	4002	3700	2945	https://maps.google.com/?q=-25.4459608602,-56.4412508234
COV06	4260	3992	3689	2936	https://maps.google.com/?q=-25.4458826123,-56.4411724692
COV06	4211	3953	3647	2904	https://maps.google.com/?q=-25.445642622,-56.4416882291
COV06	4200	3943	3637	2896	https://maps.google.com/?q=-25.4455806932,-56.44160751
COV06	4277	4002	3704	2940	https://maps.google.com/?q=-25.4457907815,-56.4406676862
COV06	4238	3965	3670	2904	https://maps.google.com/?q=-25.4453169064,-56.4402077996
COV06	4184	3914	3623	2855	https://maps.google.com/?q=-25.4458545449,-56.4394468829
COV06	4218	3949	3653	2891	https://maps.google.com/?q=-25.4451929723,-56.4400935198
COV06	4205	3939	3642	2882	https://maps.google.com/?q=-25.4451085261,-56.4400156519
COV06	4189	3926	3628	2872	https://maps.google.com/?q=-25.4450025098,-56.4399178944
COV06	4176	3915	3616	2863	https://maps.google.com/?q=-25.4449558745,-56.4400295991
COV06	4158	3901	3601	2851	https://maps.google.com/?q=-25.444798692,-56.4397334779
COV06	4212	3943	3648	2884	https://maps.google.com/?q=-25.4451200669,-56.4404681774
COV06	4185	3919	3624	2862	https://maps.google.com/?q=-25.4449048339,-56.4407528841
COV06	4182	3916	3622	2860	https://maps.google.com/?q=-25.4448823652,-56.4407826054
COV06	4181	3915	3620	2859	https://maps.google.com/?q=-25.4448724847,-56.440775752
COV06	4160	3897	3603	2843	https://maps.google.com/?q=-25.4447085135,-56.4410125721
COV06	4126	3870	3574	2821	https://maps.google.com/?q=-25.4449296483,-56.4412196349
COV06	4099	3848	3550	2803	https://maps.google.com/?q=-25.4449488795,-56.4414057756
COV06	4158	3896	3601	2842	https://maps.google.com/?q=-25.4446957738,-56.4410294238
COV06	4082	3834	3535	2792	https://maps.google.com/?q=-25.4441811248,-56.4405639287

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV06	4110	3854	3560	2805	https://maps.google.com/?q=-25.4443103153,-56.4415387756
COV06	4073	3821	3528	2776	https://maps.google.com/?q=-25.4440078263,-56.4419384859
COV06	4016	3775	3478	2739	https://maps.google.com/?q=-25.4444115854,-56.4422851555
COV06	3895	3676	3373	2662	https://maps.google.com/?q=-25.4451800001,-56.4424766667
COV06	4052	3803	3509	2760	https://maps.google.com/?q=-25.4438300374,-56.4421734154
COV06	4018	3775	3479	2738	https://maps.google.com/?q=-25.4440488464,-56.4424092602
COV06	4046	3797	3504	2755	https://maps.google.com/?q=-25.4437807832,-56.4422384995
COV06	4013	3771	3475	2734	https://maps.google.com/?q=-25.443991117,-56.4424641465
COV06	4007	3763	3470	2725	https://maps.google.com/?q=-25.4434501729,-56.4426716308
COV06	3957	3720	3427	2688	https://maps.google.com/?q=-25.4430309108,-56.4432287021
COV06	3948	3712	3419	2681	https://maps.google.com/?q=-25.4430623827,-56.4433189468
COV06	3940	3704	3412	2674	https://maps.google.com/?q=-25.4428780442,-56.4434305438
COV06	3923	3691	3397	2664	https://maps.google.com/?q=-25.4430033334,-56.4435316667
COV06	3933	3698	3406	2669	https://maps.google.com/?q=-25.4428189355,-56.4435085894
COV06	3910	3680	3386	2655	https://maps.google.com/?q=-25.4426929353,-56.4433226186
COV06	3899	3668	3377	2644	https://maps.google.com/?q=-25.4425230603,-56.4439004122
COV06	3865	3641	3347	2622	https://maps.google.com/?q=-25.4427663118,-56.4441272329
COV06	3858	3635	3341	2618	https://maps.google.com/?q=-25.442705825,-56.4441557599
COV06	3820	3604	3308	2594	https://maps.google.com/?q=-25.4430946185,-56.4444333655
COV06	3772	3565	3267	2564	https://maps.google.com/?q=-25.4434473839,-56.4447596997
COV06	3708	3511	3211	2524	https://maps.google.com/?q=-25.4439356696,-56.4452114046
COV06	3699	3504	3203	2518	https://maps.google.com/?q=-25.4429682053,-56.4453601079
COV06	3691	3497	3196	2513	https://maps.google.com/?q=-25.4430235898,-56.445424759
COV06	3880	3652	3360	2629	https://maps.google.com/?q=-25.4423561658,-56.4441203565
COV06	3747	3535	3245	2530	https://maps.google.com/?q=-25.4411372864,-56.4457266426
COV06	3725	3515	3226	2514	https://maps.google.com/?q=-25.4409304242,-56.446007853
COV06	3639	3438	3151	2451	https://maps.google.com/?q=-25.4401067424,-56.4471291805
COV06	3746	3534	3245	2530	https://maps.google.com/?q=-25.4411461075,-56.4457350531
COV06	0	0	0	0	https://maps.google.com/?q=-25.4414077066,-56.445983123
COV06	3830	3612	3316	2600	https://maps.google.com/?q=-25.4420196505,-56.4434329312
COV06	3808	3594	3298	2587	https://maps.google.com/?q=-25.4422205138,-56.4433842639
COV06	3798	3586	3290	2580	https://maps.google.com/?q=-25.4417907128,-56.4432203348
COV06	3745	3542	3243	2547	https://maps.google.com/?q=-25.4414553354,-56.443662872
COV06	3713	3516	3216	2527	https://maps.google.com/?q=-25.4416988473,-56.4438742605
COV06	3770	3562	3265	2563	https://maps.google.com/?q=-25.4415784801,-56.4430210001
COV06	4352	4077	3769	3019	https://maps.google.com/?q=-25.4468922628,-56.4418727894
COV06	4241	3987	3673	2943	https://maps.google.com/?q=-25.4463097156,-56.4426255557
COV06	4187	3943	3626	2907	https://maps.google.com/?q=-25.4459718446,-56.4423133394
COV06	4225	3974	3659	2933	https://maps.google.com/?q=-25.4462275772,-56.4427373946
COV06	4056	3836	3513	2820	https://maps.google.com/?q=-25.4453080845,-56.443915045
COV06	4417	4136	3825	3078	https://maps.google.com/?q=-25.4483856403,-56.4420148983
COV06	4477	4190	3877	3128	https://maps.google.com/?q=-25.4479451274,-56.4426901221
COV06	4519	4230	3914	3171	https://maps.google.com/?q=-25.4470892495,-56.4437285981
COV06	4276	4033	3703	3002	https://maps.google.com/?q=-25.4458996048,-56.4453254053
COV06	4176	3951	3617	2935	https://maps.google.com/?q=-25.4452756517,-56.4447871653
COV06	4163	3940	3606	2926	https://maps.google.com/?q=-25.4452100323,-56.4448765572
COV06	4208	3977	3644	2956	https://maps.google.com/?q=-25.4463266668,-56.4456883333
COV06	4165	3942	3607	2927	https://maps.google.com/?q=-25.4453321807,-56.4460692608

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV06	3926	3742	3400	2767	https://maps.google.com/?q=-25.445085709,-56.4476342966
COV06	4521	4245	3915	3198	https://maps.google.com/?q=-25.4487360664,-56.4435584513
COV06	4793	4486	4150	3438	https://maps.google.com/?q=-25.449827794,-56.4457522337
COV06	4711	4431	4080	3397	https://maps.google.com/?q=-25.4512567196,-56.4455089509
COV06	4672	4399	4046	3368	https://maps.google.com/?q=-25.4510526884,-56.4453196314
COV06	4568	4314	3956	3292	https://maps.google.com/?q=-25.4519200001,-56.4447016667
COV06	4528	4281	3921	3263	https://maps.google.com/?q=-25.4520992915,-56.444459023
COV06	4527	4281	3921	3263	https://maps.google.com/?q=-25.4516987901,-56.4445018028
COV06	4519	4274	3914	3257	https://maps.google.com/?q=-25.4517521819,-56.4444759276
COV06	4495	4254	3893	3239	https://maps.google.com/?q=-25.4515221812,-56.444342594
COV06	4674	4401	4048	3370	https://maps.google.com/?q=-25.449723963,-56.447561783
COV06	4540	4291	3932	3272	https://maps.google.com/?q=-25.449123081,-56.4483449131
COV06	4150	3965	3594	2995	https://maps.google.com/?q=-25.4490138748,-56.4506527021
COV06	4496	4255	3894	3240	https://maps.google.com/?q=-25.4489215935,-56.4486075089
COV06	4784	4515	4143	3501	https://maps.google.com/?q=-25.4536401487,-56.4492463332
COV06	4818	4543	4172	3527	https://maps.google.com/?q=-25.4513100409,-56.4493262593
COV06	0	0	0	3507	https://maps.google.com/?q=-25.4514250917,-56.4494591588
COV06	4778	4511	4138	3497	https://maps.google.com/?q=-25.4511443791,-56.4495445957
COV06	4761	4497	4123	3484	https://maps.google.com/?q=-25.4510715682,-56.4496355696
COV06	5737	5398	4969	4503	https://maps.google.com/?q=-25.4580661351,-56.4466261582
COV06	5886	5549	5097	4696	https://maps.google.com/?q=-25.4594600383,-56.4471397219
COV06	5970	5627	5171	4794	https://maps.google.com/?q=-25.4598009668,-56.4475100472
COV06	5929	5592	5134	4752	https://maps.google.com/?q=-25.4598884514,-56.4473097454
COV06	5811	5493	5033	4637	https://maps.google.com/?q=-25.4601846904,-56.4467705327
COV06	5797	5482	5021	4624	https://maps.google.com/?q=-25.4601281488,-56.4467275324
COV06	6698	6374	5800	5818	https://maps.google.com/?q=-25.4651080433,-56.4499000264
COV06	6619	6303	5732	5723	https://maps.google.com/?q=-25.4653188473,-56.4496259271
COV06	6634	6306	5746	5721	https://maps.google.com/?q=-25.4655221806,-56.4500542604
COV06	7610	7630	6590	7525	https://maps.google.com/?q=-25.4681086719,-56.4508323233
COV06	8256	8722	7150	8862	https://maps.google.com/?q=-25.4692710228,-56.449780462
COV06	8224	8670	7123	8796	https://maps.google.com/?q=-25.4693437711,-56.4496988603
COV06	8192	8617	7095	8730	https://maps.google.com/?q=-25.4694446135,-56.4499072196
COV06	8164	8573	7071	8675	https://maps.google.com/?q=-25.4693774695,-56.4499713297
COV06	8525	9488	7382	9777	https://maps.google.com/?q=-25.4705555596,-56.4493425364
COV06	8570	9653	7422	9958	https://maps.google.com/?q=-25.4716691227,-56.4493888651
COV07	9084	12880	7867	12566	https://maps.google.com/?q=-25.4731459106,-56.448157222
COV07	7874	7765	6819	7557	https://maps.google.com/?q=-25.466936191,-56.4462136953
COV07	7873	7762	6818	7553	https://maps.google.com/?q=-25.4669259552,-56.446210175
COV07	7780	7626	6738	7377	https://maps.google.com/?q=-25.466790255,-56.4467154946
COV07	7733	7558	6697	7289	https://maps.google.com/?q=-25.4671217115,-56.4454391086
COV07	7525	7267	6517	6913	https://maps.google.com/?q=-25.4674314816,-56.4442480368
COV07	7500	7235	6495	6877	https://maps.google.com/?q=-25.4674851296,-56.4441702231
COV07	7524	7265	6516	6911	https://maps.google.com/?q=-25.4674333282,-56.4442405447
COV07	7382	7082	6393	6666	https://maps.google.com/?q=-25.4676437036,-56.4433896986
COV07	7331	7032	6349	6597	https://maps.google.com/?q=-25.4678178666,-56.4434576042
COV07	6659	6297	5767	5548	https://maps.google.com/?q=-25.4689566888,-56.4386107833
COV07	6639	6279	5749	5525	https://maps.google.com/?q=-25.4690360409,-56.4386448626
COV07	6327	5959	5480	5095	https://maps.google.com/?q=-25.4696166323,-56.4360760517

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV07	6188	5821	5359	4916	https://maps.google.com/?q=-25.4699066403,-56.4349405567
COV07	5982	5649	5180	4717	https://maps.google.com/?q=-25.4707749996,-56.4353616708
COV07	5953	5625	5155	4690	https://maps.google.com/?q=-25.4708350001,-56.43523
COV07	6066	5700	5254	4762	https://maps.google.com/?q=-25.4701688963,-56.4339016326
COV07	6035	5669	5227	4723	https://maps.google.com/?q=-25.4702375329,-56.4336297239
COV07	5952	5588	5155	4622	https://maps.google.com/?q=-25.4703214539,-56.4328722092
COV07	5860	5513	5075	4537	https://maps.google.com/?q=-25.4707653166,-56.4329377763
COV07	5854	5508	5070	4531	https://maps.google.com/?q=-25.4707623672,-56.4329772291
COV07	5846	5485	5063	4495	https://maps.google.com/?q=-25.4703882793,-56.4318753782
COV07	5745	5387	4976	4376	https://maps.google.com/?q=-25.4704562108,-56.4308890548
COV07	5700	5347	4937	4331	https://maps.google.com/?q=-25.4704811485,-56.4305390005
COV07	5434	5110	4706	4068	https://maps.google.com/?q=-25.4706338428,-56.4283938432
COV07	0	0	0	3674	https://maps.google.com/?q=-25.4733940627,-56.4285326207
COV07	0	0	0	3624	https://maps.google.com/?q=-25.4733706637,-56.4289503986
COV07	0	0	0	3510	https://maps.google.com/?q=-25.4746807784,-56.4286031236
COV07	5214	4914	4515	3860	https://maps.google.com/?q=-25.4707799505,-56.4265024582
COV07	4935	4683	4274	3643	https://maps.google.com/?q=-25.4723950352,-56.4265683402
COV07	4918	4669	4259	3631	https://maps.google.com/?q=-25.4724083334,-56.4264633333
COV07	4732	4513	4098	3491	https://maps.google.com/?q=-25.4736176346,-56.4266576095
COV07	4611	4410	3993	3401	https://maps.google.com/?q=-25.4743799859,-56.4267132742
COV07	3951	3837	3422	2925	https://maps.google.com/?q=-25.4790171818,-56.4269516376
COV07	3884	3777	3364	2878	https://maps.google.com/?q=-25.4795291044,-56.4271289122
COV07	3810	3712	3299	2826	https://maps.google.com/?q=-25.4797564819,-56.426506687
COV07	3772	3678	3267	2799	https://maps.google.com/?q=-25.4798743602,-56.426184111
COV07	0	0	0	2785	https://maps.google.com/?q=-25.4797024182,-56.4262286621
COV07	3545	3474	3070	2640	https://maps.google.com/?q=-25.4818910231,-56.4262757471
COV07	3296	3248	2854	2465	https://maps.google.com/?q=-25.482978481,-56.4238151671
COV07	3262	3217	2825	2441	https://maps.google.com/?q=-25.4831356742,-56.4234594761
COV07	2978	2956	2579	2242	https://maps.google.com/?q=-25.4845535471,-56.4201663703
COV07	2929	2910	2537	2208	https://maps.google.com/?q=-25.4839410107,-56.4200527104
COV07	2818	2806	2440	2129	https://maps.google.com/?q=-25.482438752,-56.4199702309
COV07	2760	2752	2390	2089	https://maps.google.com/?q=-25.4816161449,-56.4199627358
COV07	2884	2868	2498	2176	https://maps.google.com/?q=-25.4838470891,-56.4194018954
COV07	2878	2863	2493	2172	https://maps.google.com/?q=-25.4839193366,-56.4193918038
COV07	3276	3230	2837	2451	https://maps.google.com/?q=-25.4827776596,-56.4237607196
COV07	0	0	0	2619	https://maps.google.com/?q=-25.4818936052,-56.4264898288
COV07	0	0	0	2588	https://maps.google.com/?q=-25.4817649908,-56.4269368196
COV07	0	0	0	2530	https://maps.google.com/?q=-25.48140227,-56.4277384055
COV07	0	0	0	2541	https://maps.google.com/?q=-25.4829512517,-56.4267176701
COV07	0	0	0	2357	https://maps.google.com/?q=-25.48474277,-56.4276682099
COV07	0	0	0	2319	https://maps.google.com/?q=-25.4862400001,-56.42698
COV07	3756	3664	3253	2788	https://maps.google.com/?q=-25.4791687228,-56.4282279428
COV07	3748	3656	3246	2782	https://maps.google.com/?q=-25.4792366398,-56.4282492816
COV07	4778	4524	4138	3468	https://maps.google.com/?q=-25.471067439,-56.4223705736
COV07	4487	4281	3886	3258	https://maps.google.com/?q=-25.4723041006,-56.4230945864
COV07	0	0	0	3192	https://maps.google.com/?q=-25.4729371078,-56.4231204245
COV07	0	0	0	3179	https://maps.google.com/?q=-25.472941004,-56.4232586935
COV07	4471	4248	3872	3206	https://maps.google.com/?q=-25.4712691684,-56.4190757591

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV07	4245	4044	3676	3019	https://maps.google.com/?q=-25.4714331235,-56.416397005
COV07	4036	3854	3495	2852	https://maps.google.com/?q=-25.4715118839,-56.4136961568
COV07	4018	3839	3480	2840	https://maps.google.com/?q=-25.4716435925,-56.4136263925
COV07	4025	3844	3485	2842	https://maps.google.com/?q=-25.4715152933,-56.4135377298
COV07	3982	3805	3448	2808	https://maps.google.com/?q=-25.4715494353,-56.4129480626
COV07	3778	3619	3272	2649	https://maps.google.com/?q=-25.471723708,-56.4099974834
COV07	3663	3513	3172	2560	https://maps.google.com/?q=-25.4718302243,-56.4081935763
COV07	3579	3436	3099	2496	https://maps.google.com/?q=-25.4719113305,-56.4068197479
COV07	0	0	0	2238	https://maps.google.com/?q=-25.4763447217,-56.4070760513
COV07	0	0	0	1980	https://maps.google.com/?q=-25.4817812887,-56.4074781036
COV07	3327	3204	2881	2306	https://maps.google.com/?q=-25.4721603378,-56.4023045816
COV07	3285	3168	2845	2280	https://maps.google.com/?q=-25.472631315,-56.4023127561
COV07	3254	3137	2818	2252	https://maps.google.com/?q=-25.4722511668,-56.4008822893
COV07	0	0	0	2206	https://maps.google.com/?q=-25.4731437465,-56.4008738247
COV07	0	0	0	2199	https://maps.google.com/?q=-25.4731886772,-56.4010022969
COV07	2962	2866	2565	2037	https://maps.google.com/?q=-25.4726531042,-56.394530191
COV07	2888	2801	2501	1993	https://maps.google.com/?q=-25.4736822686,-56.3944956324
COV07	2881	2791	2495	1979	https://maps.google.com/?q=-25.4727810024,-56.3925662908
COV07	2852	2763	2470	1958	https://maps.google.com/?q=-25.472828471,-56.3918241014
COV07	2826	2739	2448	1939	https://maps.google.com/?q=-25.4728726377,-56.3911640876
COV07	2787	2703	2414	1911	https://maps.google.com/?q=-25.4738096493,-56.391197029
COV07	2804	2718	2429	1923	https://maps.google.com/?q=-25.4729082733,-56.3905858439
COV07	2783	2699	2410	1908	https://maps.google.com/?q=-25.4729440545,-56.3900241674
COV07	0	0	0	1906	https://maps.google.com/?q=-25.4730259874,-56.3900251339
COV07	2755	2672	2386	1888	https://maps.google.com/?q=-25.4729933048,-56.3892507459
COV07	2690	2611	2329	1841	https://maps.google.com/?q=-25.4731081633,-56.3874467664
COV07	2588	2516	2242	1769	https://maps.google.com/?q=-25.4732998687,-56.3844463286
COV07	2294	2238	1986	1561	https://maps.google.com/?q=-25.4724066725,-56.3747090968
COV07	2235	2182	1936	1520	https://maps.google.com/?q=-25.4722415158,-56.3723943579
COV07	0	0	0	1509	https://maps.google.com/?q=-25.4727250001,-56.3723816667
COV07	1713	1684	1484	1160	https://maps.google.com/?q=-25.4724604626,-56.3448916888
COV07	1646	1623	1426	1123	https://maps.google.com/?q=-25.4750893448,-56.3448631109
COV07	1618	1597	1401	1107	https://maps.google.com/?q=-25.4755150001,-56.3460766667
COV07	1478	1457	1280	999	https://maps.google.com/?q=-25.4733051973,-56.3263212976
COV07	1431	1414	1239	973	https://maps.google.com/?q=-25.4757316668,-56.326695
COV07	1421	1402	1230	960	https://maps.google.com/?q=-25.4737517834,-56.3208776258
COV07	1353	1336	1172	914	https://maps.google.com/?q=-25.474321287,-56.3138603771
COV07	1335	1318	1156	902	https://maps.google.com/?q=-25.474482028,-56.3118790136
COV07	1302	1286	1127	879	https://maps.google.com/?q=-25.4745804945,-56.3080753545
COV07	1293	1278	1120	874	https://maps.google.com/?q=-25.4744222177,-56.3070761209
COV07	1288	1272	1115	870	https://maps.google.com/?q=-25.474475165,-56.3064168054
COV07	1275	1261	1105	862	https://maps.google.com/?q=-25.4746156632,-56.3049443646
COV07	0	0	0	860	https://maps.google.com/?q=-25.4743966668,-56.30491
COV07	1208	1195	1046	816	https://maps.google.com/?q=-25.4752240206,-56.2962945683
COV07	1136	1125	984	767	https://maps.google.com/?q=-25.4758472072,-56.2857818781
COV07	1133	1121	981	765	https://maps.google.com/?q=-25.4758915707,-56.2852920033
COV07	0	0	0	763	https://maps.google.com/?q=-25.4759900001,-56.2855133333
COV07	1109	1098	960	749	https://maps.google.com/?q=-25.4765090253,-56.2816349407

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV07	1102	1092	955	744	https://maps.google.com/?q=-25.4766247453,-56.2805771924
COV07	1055	1046	914	713	https://maps.google.com/?q=-25.4772157679,-56.2725519189
COV07	1051	1042	911	710	https://maps.google.com/?q=-25.4772632608,-56.2718484144
COV07	1049	1040	908	708	https://maps.google.com/?q=-25.4776944382,-56.2719052292
COV07	1036	1027	897	700	https://maps.google.com/?q=-25.4798016681,-56.2721600051
COV07	1032	1024	894	697	https://maps.google.com/?q=-25.4804153618,-56.2722518778
COV07	1026	1018	889	693	https://maps.google.com/?q=-25.4814049295,-56.2724000224
COV07	1008	1000	873	681	https://maps.google.com/?q=-25.4846351288,-56.2728279879
COV07	976	969	845	659	https://maps.google.com/?q=-25.4904146889,-56.2733825342
COV07	941	934	815	636	https://maps.google.com/?q=-25.4972561898,-56.2739001946
COV07	902	896	782	609	https://maps.google.com/?q=-25.5054718388,-56.274130053
COV07	879	874	761	594	https://maps.google.com/?q=-25.5107255936,-56.2743935451
COV07	867	862	751	586	https://maps.google.com/?q=-25.5135454596,-56.2745473147
COV07	856	851	742	578	https://maps.google.com/?q=-25.5161939476,-56.274691744
COV07	847	842	733	572	https://maps.google.com/?q=-25.5163683769,-56.2720754856
COV07	838	833	725	566	https://maps.google.com/?q=-25.5165376036,-56.2695365841
COV07	0	0	0	562	https://maps.google.com/?q=-25.5164576346,-56.2685291469
COV07	0	0	0	550	https://maps.google.com/?q=-25.5167047248,-56.2646839336
COV07	0	0	0	522	https://maps.google.com/?q=-25.5173134128,-56.255138931
COV07	0	0	0	493	https://maps.google.com/?q=-25.5180241846,-56.244002857
COV07	0	0	0	482	https://maps.google.com/?q=-25.518302866,-56.2396167062
COV07	0	0	0	470	https://maps.google.com/?q=-25.5186423592,-56.2344778245
COV07	0	0	0	465	https://maps.google.com/?q=-25.5187748639,-56.2324713628
COV07	0	0	0	448	https://maps.google.com/?q=-25.5192861051,-56.2243687645
COV07	0	0	0	435	https://maps.google.com/?q=-25.5196831633,-56.2179153056
COV07	0	0	0	417	https://maps.google.com/?q=-25.528375102,-56.2190465411
COV07	0	0	0	412	https://maps.google.com/?q=-25.5306825075,-56.2191313247
COV07	0	0	0	407	https://maps.google.com/?q=-25.5295445066,-56.2169467499
COV07	0	0	0	385	https://maps.google.com/?q=-25.5395593121,-56.2143782741
COV07	0	0	0	400	https://maps.google.com/?q=-25.5276932972,-56.2130938301
COV07	0	0	0	392	https://maps.google.com/?q=-25.5256021073,-56.2087418319
COV07	0	0	0	385	https://maps.google.com/?q=-25.5238949936,-56.2051894474
COV07	0	0	0	383	https://maps.google.com/?q=-25.523249637,-56.2038465776
COV07	0	0	0	369	https://maps.google.com/?q=-25.5191470475,-56.1952255855
COV07	0	0	0	367	https://maps.google.com/?q=-25.5186352784,-56.1942952655
COV07	0	0	0	366	https://maps.google.com/?q=-25.5181513847,-56.194593341
COV07	0	0	0	348	https://maps.google.com/?q=-25.5127099127,-56.181315289
COV07	0	0	0	371	https://maps.google.com/?q=-25.5163875055,-56.2010987472
COV07	0	0	0	358	https://maps.google.com/?q=-25.5127236049,-56.2072276977
COV07	0	0	0	434	https://maps.google.com/?q=-25.519250702,-56.2178575067
COV07	0	0	0	434	https://maps.google.com/?q=-25.5192944757,-56.2176698643
COV07	0	0	0	421	https://maps.google.com/?q=-25.5132286656,-56.2170467257
COV07	0	0	0	419	https://maps.google.com/?q=-25.5122141022,-56.2169140011
COV07	0	0	0	419	https://maps.google.com/?q=-25.5121983223,-56.2169837871
COV07	0	0	0	428	https://maps.google.com/?q=-25.5199048481,-56.2145160578
COV07	0	0	0	421	https://maps.google.com/?q=-25.5201551228,-56.2106003299
COV07	0	0	0	437	https://maps.google.com/?q=-25.5065781151,-56.231438367
COV07	0	0	0	466	https://maps.google.com/?q=-25.5079540511,-56.2422789444

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV07	836	831	724	565	https://maps.google.com/?q=-25.5169872585,-56.2695775045
COV07	835	830	723	564	https://maps.google.com/?q=-25.5171834264,-56.2695953567
COV07	823	818	713	556	https://maps.google.com/?q=-25.5203680463,-56.2698851783
COV07	0	0	0	555	https://maps.google.com/?q=-25.5203879678,-56.2696393738
COV07	818	813	708	552	https://maps.google.com/?q=-25.5217912063,-56.2700063383
COV07	784	780	679	530	https://maps.google.com/?q=-25.5311375425,-56.2708020947
COV07	0	0	0	502	https://maps.google.com/?q=-25.5301642093,-56.2809167177
COV07	0	0	0	487	https://maps.google.com/?q=-25.5297310961,-56.2869539998
COV07	0	0	0	484	https://maps.google.com/?q=-25.5296294156,-56.2883821952
COV07	0	0	0	483	https://maps.google.com/?q=-25.529455043,-56.2883737552
COV07	0	0	0	462	https://maps.google.com/?q=-25.5272480276,-56.2956906023
COV07	779	775	675	526	https://maps.google.com/?q=-25.5312598405,-56.269056979
COV07	777	773	673	525	https://maps.google.com/?q=-25.5313037222,-56.2684307408
COV07	776	772	672	524	https://maps.google.com/?q=-25.5313187229,-56.2682166567
COV07	774	770	671	523	https://maps.google.com/?q=-25.5313636544,-56.2675753832
COV07	774	770	670	522	https://maps.google.com/?q=-25.5311216668,-56.2676133333
COV07	773	769	669	522	https://maps.google.com/?q=-25.5313950344,-56.2671242765
COV07	773	769	669	522	https://maps.google.com/?q=-25.5314274433,-56.2671514326
COV07	767	763	664	518	https://maps.google.com/?q=-25.5314989207,-56.2650882937
COV07	763	759	661	515	https://maps.google.com/?q=-25.5316009291,-56.2636906975
COV07	755	751	654	510	https://maps.google.com/?q=-25.5318279893,-56.2609179243
COV07	752	749	652	508	https://maps.google.com/?q=-25.5325129319,-56.2610113157
COV07	740	737	641	500	https://maps.google.com/?q=-25.5365518747,-56.2612953078
COV07	738	734	639	498	https://maps.google.com/?q=-25.5372706714,-56.2613412943
COV07	733	730	635	495	https://maps.google.com/?q=-25.5387909105,-56.261447171
COV07	732	729	634	494	https://maps.google.com/?q=-25.5391881097,-56.2614747662
COV07	711	708	616	480	https://maps.google.com/?q=-25.5462840602,-56.2612703727
COV07	0	0	0	461	https://maps.google.com/?q=-25.5500880283,-56.2545359176
COV07	0	0	0	461	https://maps.google.com/?q=-25.5501636086,-56.254541682
COV07	0	0	0	458	https://maps.google.com/?q=-25.5504350152,-56.2533075075
COV07	710	707	615	480	https://maps.google.com/?q=-25.5467026082,-56.2610552878
COV07	693	691	600	468	https://maps.google.com/?q=-25.5524351291,-56.2596853353
COV07	672	669	582	454	https://maps.google.com/?q=-25.5608139587,-56.2603457687
COV07	661	658	572	446	https://maps.google.com/?q=-25.5651647966,-56.2607409608
COV07	657	654	569	444	https://maps.google.com/?q=-25.5667676794,-56.2614791135
COV07	0	0	0	451	https://maps.google.com/?q=-25.5608977896,-56.2589205519
COV07	0	0	0	450	https://maps.google.com/?q=-25.5609325971,-56.2583287153
COV07	0	0	0	449	https://maps.google.com/?q=-25.5611816365,-56.2584502332
COV07	0	0	0	440	https://maps.google.com/?q=-25.5612227193,-56.2533941361
COV07	0	0	0	436	https://maps.google.com/?q=-25.5613456366,-56.2513026199
COV07	0	0	0	435	https://maps.google.com/?q=-25.5609546199,-56.251278821
COV07	0	0	0	425	https://maps.google.com/?q=-25.561703474,-56.2454760757
COV07	0	0	0	421	https://maps.google.com/?q=-25.5618285836,-56.2434380565
COV07	0	0	0	421	https://maps.google.com/?q=-25.5618406631,-56.24327395
COV07	0	0	0	395	https://maps.google.com/?q=-25.5576598637,-56.2296906441
COV07	0	0	0	395	https://maps.google.com/?q=-25.5575460415,-56.2294565047
COV07	0	0	0	386	https://maps.google.com/?q=-25.5550952706,-56.2244154038
COV07	0	0	0	369	https://maps.google.com/?q=-25.5502605419,-56.2145639982

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV07	0	0	0	363	https://maps.google.com/?q=-25.5481896018,-56.2103448307
COV07	0	0	0	355	https://maps.google.com/?q=-25.5455823413,-56.2050361188
COV07	0	0	0	370	https://maps.google.com/?q=-25.5465996426,-56.2293271671
COV07	0	0	0	421	https://maps.google.com/?q=-25.5619601069,-56.2434900733
COV07	0	0	0	418	https://maps.google.com/?q=-25.563102953,-56.2440211754
COV07	0	0	0	414	https://maps.google.com/?q=-25.564527827,-56.2451949446
COV07	0	0	0	402	https://maps.google.com/?q=-25.5669935519,-56.2382696007
COV07	0	0	0	393	https://maps.google.com/?q=-25.5687357652,-56.2333756098
COV07	0	0	0	383	https://maps.google.com/?q=-25.5709231449,-56.2272302565
COV07	0	0	0	375	https://maps.google.com/?q=-25.5726437745,-56.2223955448
COV07	0	0	0	365	https://maps.google.com/?q=-25.5794650001,-56.2235516667
COV07	0	0	0	373	https://maps.google.com/?q=-25.5716744626,-56.2210764964
COV07	0	0	0	363	https://maps.google.com/?q=-25.5713201288,-56.21415183
COV07	0	0	0	353	https://maps.google.com/?q=-25.5674307539,-56.208799348
COV07	0	0	0	346	https://maps.google.com/?q=-25.5687536059,-56.2039476969
COV07	0	0	0	384	https://maps.google.com/?q=-25.5736516668,-56.2362783333
COV07	0	0	0	468	https://maps.google.com/?q=-25.5524254728,-56.2600372659
COV07	721	718	624	489	https://maps.google.com/?q=-25.5395283334,-56.2594966667
COV07	0	0	0	487	https://maps.google.com/?q=-25.5377748799,-56.2650717261
COV07	0	0	0	486	https://maps.google.com/?q=-25.5381282826,-56.2650942164
COV07	0	0	0	486	https://maps.google.com/?q=-25.5381216668,-56.2652766667
COV07	0	0	0	497	https://maps.google.com/?q=-25.5319129899,-56.2561773469
COV07	0	0	0	463	https://maps.google.com/?q=-25.5327991957,-56.2417230462
COV07	0	0	0	436	https://maps.google.com/?q=-25.5336120529,-56.228867896
COV07	0	0	0	514	https://maps.google.com/?q=-25.5300429029,-56.2650069766
COV07	0	0	0	519	https://maps.google.com/?q=-25.532954148,-56.2682670909
COV07	0	0	0	519	https://maps.google.com/?q=-25.5329565306,-56.2681997214
COV07	774	770	670	522	https://maps.google.com/?q=-25.5296821526,-56.2689744724
COV07	765	761	662	517	https://maps.google.com/?q=-25.5270600213,-56.2688433758
COV07	764	760	662	516	https://maps.google.com/?q=-25.5270497008,-56.2691963436
COV07	763	759	661	515	https://maps.google.com/?q=-25.526509282,-56.2687928685
COV07	0	0	0	525	https://maps.google.com/?q=-25.532537598,-56.2708736113
COV07	0	0	0	515	https://maps.google.com/?q=-25.5358831715,-56.2711273003
COV07	0	0	0	488	https://maps.google.com/?q=-25.5455032785,-56.272012082
COV07	0	0	0	468	https://maps.google.com/?q=-25.5531449082,-56.2727998391
COV07	0	0	0	475	https://maps.google.com/?q=-25.5451332912,-56.2773826558
COV07	0	0	0	469	https://maps.google.com/?q=-25.5449383415,-56.2802112952
COV07	0	0	0	468	https://maps.google.com/?q=-25.5452990156,-56.2802210921
COV07	0	0	0	464	https://maps.google.com/?q=-25.5447910378,-56.2823480771
COV07	0	0	0	441	https://maps.google.com/?q=-25.5440392924,-56.2932457448
COV07	0	0	0	434	https://maps.google.com/?q=-25.5437854684,-56.2969226115
COV07	0	0	0	422	https://maps.google.com/?q=-25.5490900044,-56.2976256203
COV07	0	0	0	409	https://maps.google.com/?q=-25.5482244866,-56.3046645847
COV07	0	0	0	404	https://maps.google.com/?q=-25.5585961963,-56.2984729787
COV07	0	0	0	393	https://maps.google.com/?q=-25.5591113625,-56.291642885
COV07	0	0	0	400	https://maps.google.com/?q=-25.5604471593,-56.2985805376
COV07	0	0	0	398	https://maps.google.com/?q=-25.5619738214,-56.2986692534
COV07	842	838	729	571	https://maps.google.com/?q=-25.5160489936,-56.2769812225

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV07	775	775	671	534	https://maps.google.com/?q=-25.5152913205,-56.2889818646
COV07	772	772	668	532	https://maps.google.com/?q=-25.5152486524,-56.2896938169
COV07	0	0	0	531	https://maps.google.com/?q=-25.5153582518,-56.2896905668
COV07	750	751	649	519	https://maps.google.com/?q=-25.5149678147,-56.2940782843
COV07	747	749	647	518	https://maps.google.com/?q=-25.514935272,-56.2945862099
COV07	0	0	0	516	https://maps.google.com/?q=-25.5156198506,-56.2946372437
COV07	0	0	0	489	https://maps.google.com/?q=-25.5154289176,-56.3044699729
COV07	0	0	0	461	https://maps.google.com/?q=-25.5144735075,-56.316368094
COV07	0	0	0	448	https://maps.google.com/?q=-25.5139499837,-56.3224539879
COV07	0	0	0	420	https://maps.google.com/?q=-25.5127314304,-56.3365589041
COV07	0	0	0	420	https://maps.google.com/?q=-25.5123524875,-56.3365536793
COV07	0	0	0	419	https://maps.google.com/?q=-25.5126881605,-56.3370594644
COV07	0	0	0	417	https://maps.google.com/?q=-25.5125697652,-56.3384289996
COV07	0	0	0	395	https://maps.google.com/?q=-25.5100424794,-56.3500558106
COV07	0	0	0	392	https://maps.google.com/?q=-25.5083064406,-56.351250947
COV07	0	0	0	389	https://maps.google.com/?q=-25.507042947,-56.3519596515
COV07	0	0	0	389	https://maps.google.com/?q=-25.5069099433,-56.3520342534
COV07	0	0	0	381	https://maps.google.com/?q=-25.5044606833,-56.3564951714
COV07	0	0	0	374	https://maps.google.com/?q=-25.5024137778,-56.3603528144
COV07	0	0	0	353	https://maps.google.com/?q=-25.5005088676,-56.3751892121
COV07	0	0	0	378	https://maps.google.com/?q=-25.5030575421,-56.3557367109
COV07	0	0	0	385	https://maps.google.com/?q=-25.5043830838,-56.3511182574
COV07	0	0	0	378	https://maps.google.com/?q=-25.5047550735,-56.3477987823
COV07	0	0	0	376	https://maps.google.com/?q=-25.5045341145,-56.3463454527
COV07	0	0	0	416	https://maps.google.com/?q=-25.5142082765,-56.3372222106
COV07	719	722	622	501	https://maps.google.com/?q=-25.5093650013,-56.2941099999
COV07	866	860	750	585	https://maps.google.com/?q=-25.5135354092,-56.2742654143
COV07	961	955	832	651	https://maps.google.com/?q=-25.4902270124,-56.275245832
COV07	1025	1017	888	692	https://maps.google.com/?q=-25.4775877785,-56.2670400224
COV07	1021	1012	884	689	https://maps.google.com/?q=-25.4776471251,-56.2662065064
COV07	973	966	843	657	https://maps.google.com/?q=-25.4771885403,-56.2567837261
COV07	963	956	834	650	https://maps.google.com/?q=-25.4768746288,-56.2545480019
COV07	0	0	0	631	https://maps.google.com/?q=-25.480985632,-56.254993958
COV07	0	0	0	592	https://maps.google.com/?q=-25.4891842147,-56.2543148212
COV07	0	0	0	563	https://maps.google.com/?q=-25.4966908723,-56.2553701486
COV07	0	0	0	538	https://maps.google.com/?q=-25.5040443722,-56.2563543329
COV07	0	0	0	528	https://maps.google.com/?q=-25.5070821628,-56.2567449842
COV07	0	0	0	591	https://maps.google.com/?q=-25.4891846701,-56.2540817174
COV07	939	932	813	634	https://maps.google.com/?q=-25.4761475889,-56.2493708898
COV07	926	919	802	625	https://maps.google.com/?q=-25.4757206066,-56.2463310966
COV07	922	916	799	623	https://maps.google.com/?q=-25.4759016668,-56.2459433333
COV07	920	914	797	621	https://maps.google.com/?q=-25.4755520998,-56.2450982439
COV07	0	0	0	596	https://maps.google.com/?q=-25.4814659963,-56.2452552091
COV07	907	900	785	612	https://maps.google.com/?q=-25.4745683296,-56.2420481081
COV07	899	893	778	607	https://maps.google.com/?q=-25.4739565618,-56.2403201007
COV07	899	892	778	607	https://maps.google.com/?q=-25.474008336,-56.2403199996
COV07	895	889	775	604	https://maps.google.com/?q=-25.4736223649,-56.2393720723
COV07	882	877	764	596	https://maps.google.com/?q=-25.4731137697,-56.2363645602

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV07	882	877	764	596	https://maps.google.com/?q=-25.4731146188,-56.2363545609
COV07	848	843	735	573	https://maps.google.com/?q=-25.473790158,-56.2272965977
COV07	848	843	734	573	https://maps.google.com/?q=-25.4738466692,-56.227298332
COV07	831	827	720	561	https://maps.google.com/?q=-25.4742063575,-56.2226364715
COV07	830	825	719	561	https://maps.google.com/?q=-25.4742980137,-56.2222389457
COV07	823	818	713	556	https://maps.google.com/?q=-25.4747279801,-56.2203261087
COV07	1023	1015	886	691	https://maps.google.com/?q=-25.4777643379,-56.2671123881
COV07	2545	2478	2204	1744	https://maps.google.com/?q=-25.4739725182,-56.3848394601
COV07	0	0	0	1643	https://maps.google.com/?q=-25.4768688305,-56.386560224
COV07	0	0	0	1447	https://maps.google.com/?q=-25.4835415899,-56.3905128826
COV07	0	0	0	1319	https://maps.google.com/?q=-25.4888490443,-56.393657138
COV07	0	0	0	1204	https://maps.google.com/?q=-25.4945733289,-56.3970600005
COV07	2059	2038	1783	1456	https://maps.google.com/?q=-25.4829600266,-56.3790706746
COV07	2029	2010	1757	1437	https://maps.google.com/?q=-25.4828694185,-56.3781955171
COV07	1846	1840	1599	1325	https://maps.google.com/?q=-25.4874153467,-56.3767526542
COV07	2678	2601	2320	1835	https://maps.google.com/?q=-25.473292806,-56.3874668496
COV07	2602	2533	2253	1790	https://maps.google.com/?q=-25.4736605896,-56.388437059
COV07	2611	2541	2261	1795	https://maps.google.com/?q=-25.4738801131,-56.3880818156
COV07	2749	2667	2380	1884	https://maps.google.com/?q=-25.4730816668,-56.389285
COV07	2771	2692	2400	1910	https://maps.google.com/?q=-25.4740400001,-56.3918283333
COV07	3649	3502	3160	2551	https://maps.google.com/?q=-25.471960681,-56.4081946753
COV07	3717	3564	3219	2602	https://maps.google.com/?q=-25.4725720157,-56.4100327728
COV07	0	0	0	2772	https://maps.google.com/?q=-25.472012821,-56.4129804639
COV07	0	0	0	2606	https://maps.google.com/?q=-25.4742637753,-56.4131378438
COV07	0	0	0	2542	https://maps.google.com/?q=-25.475190605,-56.4132026463
COV07	0	0	0	2260	https://maps.google.com/?q=-25.4785438013,-56.41478726
COV07	0	0	0	2175	https://maps.google.com/?q=-25.4783281078,-56.4165427333
COV07	0	0	0	2134	https://maps.google.com/?q=-25.4775036284,-56.4164881226
COV07	5985	5628	5183	4676	https://maps.google.com/?q=-25.4704495961,-56.4337506938
COV07	5940	5592	5144	4634	https://maps.google.com/?q=-25.4704916668,-56.4335216667
COV08	9084	12880	7867	12566	https://maps.google.com/?q=-25.4730115773,-56.4478679012
COV08	8440	9175	7309	9415	https://maps.google.com/?q=-25.4705173131,-56.4499788952
COV08	8438	9171	7308	9410	https://maps.google.com/?q=-25.4705105676,-56.4499727369
COV08	8364	8948	7244	9143	https://maps.google.com/?q=-25.4702339867,-56.4504055221
COV08	8331	8852	7214	9025	https://maps.google.com/?q=-25.4701007612,-56.4506005928
COV08	7682	7689	6653	7563	https://maps.google.com/?q=-25.4681005946,-56.4534142991
COV08	7385	7236	6395	6984	https://maps.google.com/?q=-25.4695385305,-56.4543168321
COV08	7318	7148	6338	6884	https://maps.google.com/?q=-25.4697463952,-56.4544571165
COV08	6851	6623	5933	6235	https://maps.google.com/?q=-25.4711894095,-56.455435368
COV08	6969	6673	6035	6252	https://maps.google.com/?q=-25.4682397425,-56.4566919569
COV08	6738	6418	5836	5881	https://maps.google.com/?q=-25.4668953194,-56.4559362681
COV08	6610	6280	5724	5684	https://maps.google.com/?q=-25.4660686127,-56.4556921982
COV08	6360	6019	5508	5318	https://maps.google.com/?q=-25.4659618935,-56.4576841854
COV08	6286	5955	5444	5236	https://maps.google.com/?q=-25.4658106744,-56.4573604251
COV08	6244	5899	5407	5154	https://maps.google.com/?q=-25.465972117,-56.4586668457
COV08	6065	5718	5252	4912	https://maps.google.com/?q=-25.4659578097,-56.4602388097
COV08	5905	5559	5114	4703	https://maps.google.com/?q=-25.4659426038,-56.4617176932
COV08	5716	5372	4950	4467	https://maps.google.com/?q=-25.465942982,-56.463559039

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV08	5603	5256	4852	4277	https://maps.google.com/?q=-25.4661693052,-56.4652108903
COV08	5507	5160	4770	4129	https://maps.google.com/?q=-25.4664033211,-56.4665932283
COV08	5334	4993	4619	3937	https://maps.google.com/?q=-25.4669805734,-56.4681077846
COV08	5312	4972	4600	3914	https://maps.google.com/?q=-25.4670213179,-56.4683583486
COV08	5266	4928	4560	3864	https://maps.google.com/?q=-25.4671057994,-56.4688851888
COV08	5208	4874	4510	3803	https://maps.google.com/?q=-25.4672158648,-56.4695581682
COV08	5145	4823	4455	3753	https://maps.google.com/?q=-25.4668365383,-56.4695389708
COV08	5139	4818	4450	3748	https://maps.google.com/?q=-25.466828881,-56.4694998097
COV08	5083	4773	4402	3705	https://maps.google.com/?q=-25.4666564443,-56.4691854949
COV08	5009	4713	4338	3649	https://maps.google.com/?q=-25.4662659193,-56.4689370713
COV08	4455	4252	3858	3240	https://maps.google.com/?q=-25.4631376905,-56.4670510733
COV08	5050	4747	4374	3680	https://maps.google.com/?q=-25.4665834129,-56.4693900406
COV08	5183	4850	4489	3777	https://maps.google.com/?q=-25.4672625604,-56.4698499987
COV08	0	0	0	3166	https://maps.google.com/?q=-25.471673539,-56.4721843252
COV08	5174	4841	4481	3767	https://maps.google.com/?q=-25.467280101,-56.469960238
COV08	5146	4814	4456	3737	https://maps.google.com/?q=-25.4673396449,-56.4702997726
COV08	5090	4762	4408	3679	https://maps.google.com/?q=-25.4674467998,-56.4709809301
COV08	5030	4713	4356	3633	https://maps.google.com/?q=-25.467075091,-56.4709472086
COV08	4972	4667	4306	3590	https://maps.google.com/?q=-25.4667258372,-56.4708475025
COV08	4956	4635	4292	3543	https://maps.google.com/?q=-25.4677431326,-56.4726616246
COV08	4909	4590	4251	3495	https://maps.google.com/?q=-25.4678529914,-56.4732846052
COV08	0	0	0	3350	https://maps.google.com/?q=-25.4666793232,-56.4729916768
COV08	0	0	0	3278	https://maps.google.com/?q=-25.4660753445,-56.4726239025
COV08	0	0	0	3133	https://maps.google.com/?q=-25.4647922289,-56.4718402359
COV08	0	0	0	3073	https://maps.google.com/?q=-25.4642354313,-56.471502019
COV08	0	0	0	3012	https://maps.google.com/?q=-25.4638936237,-56.4721252514
COV08	0	0	0	2964	https://maps.google.com/?q=-25.4636102719,-56.4726366884
COV08	0	0	0	2949	https://maps.google.com/?q=-25.4637628559,-56.4727009543
COV08	0	0	0	2935	https://maps.google.com/?q=-25.4639212461,-56.4727603646
COV08	0	0	0	2882	https://maps.google.com/?q=-25.4627789855,-56.472121909
COV08	0	0	0	2854	https://maps.google.com/?q=-25.4624920106,-56.471938238
COV08	0	0	0	2789	https://maps.google.com/?q=-25.4617867193,-56.4715063921
COV08	0	0	0	2793	https://maps.google.com/?q=-25.4623240828,-56.4732026728
COV08	0	0	0	2724	https://maps.google.com/?q=-25.4615437949,-56.472737308
COV08	0	0	0	2629	https://maps.google.com/?q=-25.4604392743,-56.4720268183
COV08	0	0	0	2765	https://maps.google.com/?q=-25.4626302718,-56.4733925085
COV08	0	0	0	2712	https://maps.google.com/?q=-25.4632182732,-56.4737871397
COV08	4786	4474	4145	3373	https://maps.google.com/?q=-25.4681181826,-56.4749473091
COV08	4392	4154	3803	3097	https://maps.google.com/?q=-25.4660625806,-56.4756910644
COV08	4386	4149	3798	3093	https://maps.google.com/?q=-25.4660212497,-56.4756806317
COV08	0	0	0	3031	https://maps.google.com/?q=-25.465805451,-56.4764420626
COV08	4645	4342	4022	3237	https://maps.google.com/?q=-25.4684290066,-56.4769591236
COV08	4621	4320	4002	3214	https://maps.google.com/?q=-25.4684801672,-56.4773109402
COV08	4570	4272	3958	3166	https://maps.google.com/?q=-25.4686007562,-56.4780710097
COV08	4464	4172	3866	3067	https://maps.google.com/?q=-25.4688765682,-56.4797147684
COV08	4451	4160	3854	3054	https://maps.google.com/?q=-25.4689106146,-56.4799234309
COV08	4391	4112	3803	3015	https://maps.google.com/?q=-25.4684565636,-56.4800272584
COV08	4308	4026	3731	2924	https://maps.google.com/?q=-25.469293822,-56.4822721477

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV08	4279	3999	3706	2898	https://maps.google.com/?q=-25.4693625859,-56.4827642198
COV08	4184	3923	3623	2837	https://maps.google.com/?q=-25.470066846,-56.4831677403
COV08	4161	3904	3603	2822	https://maps.google.com/?q=-25.4702406506,-56.4832590568
COV08	4102	3856	3552	2784	https://maps.google.com/?q=-25.4706943693,-56.4835019542
COV08	4094	3850	3545	2779	https://maps.google.com/?q=-25.4707574222,-56.4835358853
COV08	3988	3763	3454	2713	https://maps.google.com/?q=-25.4715959938,-56.483941184
COV08	3956	3737	3426	2693	https://maps.google.com/?q=-25.4718582886,-56.4840679577
COV08	3796	3604	3287	2593	https://maps.google.com/?q=-25.473191972,-56.4847117027
COV08	0	0	0	2413	https://maps.google.com/?q=-25.4743943023,-56.4818499149
COV08	3747	3563	3245	2563	https://maps.google.com/?q=-25.4736158474,-56.4849172803
COV08	3542	3389	3067	2436	https://maps.google.com/?q=-25.4754606531,-56.4858120208
COV08	3397	3265	2942	2347	https://maps.google.com/?q=-25.476862184,-56.4864865946
COV08	0	0	0	2284	https://maps.google.com/?q=-25.4762209783,-56.4875379528
COV08	3303	3183	2860	2290	https://maps.google.com/?q=-25.4778160848,-56.4869451568
COV08	0	0	0	2118	https://maps.google.com/?q=-25.4792331011,-56.4835534264
COV08	3092	2999	2678	2160	https://maps.google.com/?q=-25.4801086285,-56.4880511405
COV08	2805	2744	2430	1983	https://maps.google.com/?q=-25.4836755774,-56.4897618583
COV08	2677	2629	2319	1904	https://maps.google.com/?q=-25.4854810432,-56.4905966362
COV08	0	0	0	1768	https://maps.google.com/?q=-25.488870572,-56.4922498385
COV08	0	0	0	1696	https://maps.google.com/?q=-25.4881325352,-56.4945188191
COV08	0	0	0	1728	https://maps.google.com/?q=-25.4899450174,-56.4927739075
COV08	2590	2549	2243	1849	https://maps.google.com/?q=-25.4860183515,-56.4891348738
COV08	0	0	0	2697	https://maps.google.com/?q=-25.4708260757,-56.4812394576
COV08	0	0	0	2686	https://maps.google.com/?q=-25.4709728567,-56.4813099495
COV08	4259	3980	3688	2880	https://maps.google.com/?q=-25.4694174295,-56.4831088243
COV08	4173	3900	3614	2804	https://maps.google.com/?q=-25.4696599664,-56.4846328466
COV08	4093	3825	3545	2734	https://maps.google.com/?q=-25.4699102455,-56.4860953786
COV08	4072	3806	3526	2715	https://maps.google.com/?q=-25.4699778087,-56.486490207
COV08	4070	3804	3525	2714	https://maps.google.com/?q=-25.4699828214,-56.4865195006
COV08	4003	3741	3467	2656	https://maps.google.com/?q=-25.4701905909,-56.4878135519
COV08	3950	3692	3421	2611	https://maps.google.com/?q=-25.4702120268,-56.4888708714
COV08	3914	3658	3390	2580	https://maps.google.com/?q=-25.4701272543,-56.4896103323
COV08	3850	3599	3334	2527	https://maps.google.com/?q=-25.4699382087,-56.4909377443
COV08	3835	3585	3321	2514	https://maps.google.com/?q=-25.4698919209,-56.4912593747
COV08	3830	3581	3317	2511	https://maps.google.com/?q=-25.4698437036,-56.4912431112
COV08	3814	3565	3303	2496	https://maps.google.com/?q=-25.4698268728,-56.4917113524
COV08	3675	3436	3183	2382	https://maps.google.com/?q=-25.4693810557,-56.4948087738
COV08	0	0	0	2380	https://maps.google.com/?q=-25.4693438304,-56.4948019634
COV08	3615	3380	3131	2333	https://maps.google.com/?q=-25.469557877,-56.4962006474
COV08	0	0	0	2237	https://maps.google.com/?q=-25.4703758014,-56.4942614732
COV08	0	0	0	2060	https://maps.google.com/?q=-25.4722967679,-56.4912381982
COV08	3605	3370	3122	2325	https://maps.google.com/?q=-25.4696483716,-56.4964273381
COV08	3544	3313	3069	2276	https://maps.google.com/?q=-25.4701537854,-56.4978409937
COV08	3509	3281	3039	2248	https://maps.google.com/?q=-25.4704433696,-56.4986509907
COV08	3480	3254	3014	2225	https://maps.google.com/?q=-25.4706512024,-56.4993723275
COV08	3345	3128	2897	2119	https://maps.google.com/?q=-25.4708594115,-56.503013506
COV08	3314	3103	2870	2102	https://maps.google.com/?q=-25.4704578237,-56.5029990477
COV08	3335	3119	2888	2111	https://maps.google.com/?q=-25.4708736312,-56.5033067856

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV08	3305	3091	2862	2088	https://maps.google.com/?q=-25.4709147944,-56.5041558351
COV08	3245	3035	2811	2043	https://maps.google.com/?q=-25.4710153134,-56.505902202
COV08	3071	2893	2659	1950	https://maps.google.com/?q=-25.4732236583,-56.5069928441
COV08	3059	2884	2649	1944	https://maps.google.com/?q=-25.4733692873,-56.5070674798
COV08	0	0	0	1820	https://maps.google.com/?q=-25.4765705433,-56.5087689554
COV08	3064	2887	2653	1946	https://maps.google.com/?q=-25.4732512619,-56.5068901738
COV08	3140	2937	2719	1962	https://maps.google.com/?q=-25.4711932771,-56.5091560261
COV08	0	0	0	1953	https://maps.google.com/?q=-25.4714566752,-56.5091499009
COV08	0	0	0	1920	https://maps.google.com/?q=-25.4723599442,-56.5091288954
COV08	0	0	0	1891	https://maps.google.com/?q=-25.4727838967,-56.5086742131
COV08	0	0	0	1885	https://maps.google.com/?q=-25.4723511459,-56.5102491729
COV08	0	0	0	1869	https://maps.google.com/?q=-25.4728226155,-56.5102441944
COV08	0	0	0	1859	https://maps.google.com/?q=-25.4730916668,-56.5102533333
COV08	0	0	0	1858	https://maps.google.com/?q=-25.473109257,-56.5102087075
COV08	3118	2916	2700	1946	https://maps.google.com/?q=-25.4712268502,-56.5098665234
COV08	3094	2895	2680	1928	https://maps.google.com/?q=-25.4712269457,-56.5106323785
COV08	3069	2871	2658	1909	https://maps.google.com/?q=-25.471308086,-56.5114538609
COV08	2993	2800	2592	1853	https://maps.google.com/?q=-25.4714459745,-56.5140555686
COV08	2904	2717	2515	1787	https://maps.google.com/?q=-25.4716062903,-56.5172709041
COV08	2858	2674	2475	1754	https://maps.google.com/?q=-25.4716985455,-56.5189981138
COV08	2746	2584	2379	1699	https://maps.google.com/?q=-25.4736257316,-56.5189595606
COV08	2715	2557	2351	1683	https://maps.google.com/?q=-25.4735331363,-56.5183450523
COV08	0	0	0	1679	https://maps.google.com/?q=-25.4742712099,-56.5189859794
COV08	2851	2668	2469	1749	https://maps.google.com/?q=-25.471711282,-56.5192443291
COV08	2787	2609	2414	1703	https://maps.google.com/?q=-25.4718414822,-56.5217617487
COV08	2786	2607	2412	1702	https://maps.google.com/?q=-25.471844847,-56.5218255508
COV08	2675	2504	2317	1624	https://maps.google.com/?q=-25.4726101662,-56.5263547526
COV08	2602	2436	2253	1572	https://maps.google.com/?q=-25.4735633137,-56.5294851625
COV08	2590	2425	2243	1564	https://maps.google.com/?q=-25.4737216486,-56.5299993155
COV08	2581	2416	2235	1557	https://maps.google.com/?q=-25.4738472673,-56.5304112433
COV08	2572	2409	2228	1551	https://maps.google.com/?q=-25.4739598156,-56.5307803148
COV08	2486	2328	2153	1491	https://maps.google.com/?q=-25.4751020915,-56.534806323
COV08	2459	2303	2130	1473	https://maps.google.com/?q=-25.4754964092,-56.5361100766
COV08	2456	2300	2127	1471	https://maps.google.com/?q=-25.475543364,-56.5362652337
COV08	2448	2293	2120	1466	https://maps.google.com/?q=-25.4756511139,-56.5366384375
COV08	2446	2291	2118	1464	https://maps.google.com/?q=-25.4755960851,-56.5366526391
COV08	2440	2285	2113	1460	https://maps.google.com/?q=-25.4757698583,-56.5370497267
COV08	2416	2263	2092	1443	https://maps.google.com/?q=-25.4761296774,-56.5382683406
COV08	2320	2174	2010	1378	https://maps.google.com/?q=-25.4776200692,-56.5433163513
COV08	2267	2124	1963	1342	https://maps.google.com/?q=-25.478509187,-56.5463281638
COV08	0	0	0	1216	https://maps.google.com/?q=-25.4855881419,-56.5477652672
COV08	2213	2074	1916	1306	https://maps.google.com/?q=-25.4794543687,-56.5495163591
COV08	2211	2072	1915	1305	https://maps.google.com/?q=-25.4793980449,-56.5495343876
COV08	2208	2069	1912	1303	https://maps.google.com/?q=-25.4795510023,-56.5498423304
COV08	2190	2054	1896	1295	https://maps.google.com/?q=-25.4791264703,-56.5501181946
COV08	2188	2050	1895	1289	https://maps.google.com/?q=-25.4799142644,-56.5510622329
COV08	2151	2016	1863	1266	https://maps.google.com/?q=-25.4805904027,-56.5533329426
COV08	2145	2010	1857	1261	https://maps.google.com/?q=-25.4807188678,-56.5537643895

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV08	0	0	0	1229	https://maps.google.com/?q=-25.4827025644,-56.5529678718
COV08	2122	1989	1838	1246	https://maps.google.com/?q=-25.4811508901,-56.5552153645
COV08	2110	1979	1827	1241	https://maps.google.com/?q=-25.4808133068,-56.5553682042
COV08	2055	1926	1780	1202	https://maps.google.com/?q=-25.4825100148,-56.5597985164
COV08	2038	1910	1765	1191	https://maps.google.com/?q=-25.4828848216,-56.5609941436
COV08	0	0	0	1162	https://maps.google.com/?q=-25.4848606771,-56.5601145227
COV08	0	0	0	989	https://maps.google.com/?q=-25.4995880317,-56.561423505
COV08	0	0	0	942	https://maps.google.com/?q=-25.5044700408,-56.5618827089
COV08	0	0	0	897	https://maps.google.com/?q=-25.5025494972,-56.5568860512
COV08	0	0	0	892	https://maps.google.com/?q=-25.5024766819,-56.5562148535
COV08	0	0	0	767	https://maps.google.com/?q=-25.5179781448,-56.5543740146
COV08	0	0	0	798	https://maps.google.com/?q=-25.4921804057,-56.5494793159
COV08	0	0	0	851	https://maps.google.com/?q=-25.5141722409,-56.5664757698
COV08	0	0	0	792	https://maps.google.com/?q=-25.5221918342,-56.5670475882
COV08	0	0	0	772	https://maps.google.com/?q=-25.5252255423,-56.567261685
COV08	0	0	0	742	https://maps.google.com/?q=-25.5298203544,-56.5664408409
COV08	0	0	0	725	https://maps.google.com/?q=-25.5326794791,-56.5656154155
COV08	0	0	0	697	https://maps.google.com/?q=-25.5333424401,-56.5602269633
COV08	0	0	0	670	https://maps.google.com/?q=-25.5412531559,-56.5597340682
COV08	0	0	0	656	https://maps.google.com/?q=-25.5411971361,-56.5566118968
COV08	0	0	0	553	https://maps.google.com/?q=-25.5615486387,-56.5591894459
COV08	0	0	0	1158	https://maps.google.com/?q=-25.485050201,-56.5604022861
COV08	2034	1907	1761	1188	https://maps.google.com/?q=-25.4829645578,-56.5612722098
COV08	1968	1845	1704	1145	https://maps.google.com/?q=-25.4844158252,-56.5661427641
COV08	1673	1569	1449	958	https://maps.google.com/?q=-25.4922884396,-56.592607542
COV08	1380	1322	1195	833	https://maps.google.com/?q=-25.5031537924,-56.58216729
COV08	1578	1481	1367	899	https://maps.google.com/?q=-25.4953892925,-56.6031513525
COV08	1370	1286	1186	772	https://maps.google.com/?q=-25.5037372825,-56.6315353338
COV08	1360	1277	1178	766	https://maps.google.com/?q=-25.5043199999,-56.6330944694
COV08	0	0	0	603	https://maps.google.com/?q=-25.5346911548,-56.6151934728
COV08	1326	1245	1148	745	https://maps.google.com/?q=-25.5059271033,-56.6386553668
COV08	1270	1193	1100	712	https://maps.google.com/?q=-25.5087498917,-56.6484248916
COV08	1268	1191	1098	711	https://maps.google.com/?q=-25.508866788,-56.6488222279
COV08	0	0	0	658	https://maps.google.com/?q=-25.5201360466,-56.6493561628
COV08	0	0	0	648	https://maps.google.com/?q=-25.5212517475,-56.6510388411
COV08	1267	1189	1097	710	https://maps.google.com/?q=-25.5089256258,-56.6490850204
COV08	1234	1159	1069	690	https://maps.google.com/?q=-25.5107216443,-56.6552485234
COV08	1229	1154	1065	688	https://maps.google.com/?q=-25.5109833334,-56.6561466667
COV08	1220	1146	1057	682	https://maps.google.com/?q=-25.5116595885,-56.6578813809
COV08	1196	1123	1035	668	https://maps.google.com/?q=-25.5131247633,-56.6628314632
COV08	1181	1109	1023	659	https://maps.google.com/?q=-25.5139000001,-56.66591
COV08	1175	1104	1018	655	https://maps.google.com/?q=-25.5142745408,-56.6671686673
COV08	0	0	0	619	https://maps.google.com/?q=-25.5228547467,-56.6644251473
COV08	0	0	0	617	https://maps.google.com/?q=-25.5233647208,-56.6640727247
COV08	0	0	0	608	https://maps.google.com/?q=-25.5256679348,-56.6630622858
COV08	0	0	0	578	https://maps.google.com/?q=-25.5298881178,-56.6558069296
COV08	0	0	0	573	https://maps.google.com/?q=-25.5301000001,-56.65481
COV08	0	0	0	574	https://maps.google.com/?q=-25.5310700001,-56.6556833333

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV08	0	0	0	615	https://maps.google.com/?q=-25.5228992539,-56.6630354538
COV08	0	0	0	601	https://maps.google.com/?q=-25.5211650001,-56.6603883333
COV08	1130	1062	979	629	https://maps.google.com/?q=-25.5172205751,-56.6770705346
COV08	1125	1057	974	626	https://maps.google.com/?q=-25.5175885385,-56.6782760863
COV08	0	0	0	598	https://maps.google.com/?q=-25.5250857706,-56.6779266649
COV08	0	0	0	566	https://maps.google.com/?q=-25.5304705567,-56.6719276071
COV08	1122	1054	972	624	https://maps.google.com/?q=-25.5177062745,-56.6789721815
COV08	1122	1054	972	624	https://maps.google.com/?q=-25.5177216668,-56.6790483333
COV08	1107	1040	959	615	https://maps.google.com/?q=-25.5189137037,-56.6824636403
COV08	1102	1035	954	612	https://maps.google.com/?q=-25.5192033334,-56.6838533333
COV08	1094	1028	947	608	https://maps.google.com/?q=-25.5197043924,-56.6857102942
COV08	1069	1007	926	598	https://maps.google.com/?q=-25.5223283334,-56.68519
COV08	1090	1024	944	606	https://maps.google.com/?q=-25.5200188964,-56.6866131516
COV08	1084	1019	939	602	https://maps.google.com/?q=-25.5204594017,-56.6880722221
COV08	1077	1011	932	597	https://maps.google.com/?q=-25.521001016,-56.6900676433
COV08	1070	1006	927	594	https://maps.google.com/?q=-25.5214993143,-56.6916182533
COV08	1068	1004	925	593	https://maps.google.com/?q=-25.5216616668,-56.692185
COV08	1059	995	917	587	https://maps.google.com/?q=-25.522370857,-56.6945977983
COV08	1058	994	916	586	https://maps.google.com/?q=-25.5224735784,-56.6949351485
COV08	1040	978	901	576	https://maps.google.com/?q=-25.5239541499,-56.6995153758
COV08	1030	968	892	570	https://maps.google.com/?q=-25.5246757213,-56.7024512393
COV08	978	924	847	550	https://maps.google.com/?q=-25.5310916668,-56.7017983333
COV08	1024	962	887	567	https://maps.google.com/?q=-25.5251466668,-56.7040433333
COV08	0	0	0	567	https://maps.google.com/?q=-25.5252150001,-56.7039483333
COV08	1019	958	883	564	https://maps.google.com/?q=-25.5255833334,-56.7054633333
COV08	1018	956	881	563	https://maps.google.com/?q=-25.5256950451,-56.7059018057
COV08	1012	951	877	560	https://maps.google.com/?q=-25.5264150478,-56.7068790641
COV08	1009	948	874	559	https://maps.google.com/?q=-25.5260450001,-56.706975
COV08	1005	946	871	557	https://maps.google.com/?q=-25.5256450001,-56.7071733333
COV08	1007	947	872	557	https://maps.google.com/?q=-25.5262950941,-56.7079393571
COV08	1000	939	866	553	https://maps.google.com/?q=-25.5270928667,-56.7101466782
COV08	987	928	855	545	https://maps.google.com/?q=-25.5281673985,-56.7138360978
COV08	970	912	840	535	https://maps.google.com/?q=-25.5297244628,-56.7191351756
COV08	963	905	834	531	https://maps.google.com/?q=-25.5303877934,-56.7213969502
COV08	960	902	831	530	https://maps.google.com/?q=-25.5306005942,-56.7221213421
COV08	959	901	830	530	https://maps.google.com/?q=-25.5306733089,-56.722090746
COV08	958	901	830	529	https://maps.google.com/?q=-25.5307732684,-56.722048686
COV08	951	894	823	526	https://maps.google.com/?q=-25.5322785509,-56.7214152985
COV08	948	892	821	524	https://maps.google.com/?q=-25.5328465283,-56.7211769283
COV08	944	888	817	523	https://maps.google.com/?q=-25.5334120592,-56.7209229192
COV08	944	888	817	523	https://maps.google.com/?q=-25.5334144713,-56.7209218358
COV08	936	882	810	520	https://maps.google.com/?q=-25.5344332448,-56.7204825703
COV08	934	880	809	519	https://maps.google.com/?q=-25.5346848461,-56.7203685565
COV08	0	0	0	514	https://maps.google.com/?q=-25.535064781,-56.7219791346
COV08	0	0	0	514	https://maps.google.com/?q=-25.5350970856,-56.7219791471
COV08	895	847	775	504	https://maps.google.com/?q=-25.5399912845,-56.7179637254
COV08	0	0	0	497	https://maps.google.com/?q=-25.538581692,-56.7151995635
COV08	885	839	766	500	https://maps.google.com/?q=-25.5413918894,-56.717342695

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV08	835	796	723	481	https://maps.google.com/?q=-25.5483535674,-56.7131068185
COV08	0	0	0	471	https://maps.google.com/?q=-25.5508993369,-56.7093235202
COV08	0	0	0	465	https://maps.google.com/?q=-25.5524652407,-56.7070214608
COV08	0	0	0	455	https://maps.google.com/?q=-25.5552300001,-56.7029566667
COV08	0	0	0	465	https://maps.google.com/?q=-25.5524353006,-56.7069585877
COV08	800	765	692	466	https://maps.google.com/?q=-25.5545343083,-56.7130624777
COV08	795	762	689	465	https://maps.google.com/?q=-25.5552948789,-56.7130825091
COV08	792	759	686	463	https://maps.google.com/?q=-25.5558977674,-56.7130440994
COV08	768	738	666	454	https://maps.google.com/?q=-25.5603217913,-56.7123882091
COV08	0	0	0	423	https://maps.google.com/?q=-25.5616451894,-56.7292784871
COV08	751	723	650	446	https://maps.google.com/?q=-25.5636439392,-56.7111355731
COV08	0	0	0	436	https://maps.google.com/?q=-25.5604844069,-56.7072560527
COV08	724	700	627	435	https://maps.google.com/?q=-25.5688866795,-56.7092781984
COV08	0	0	0	421	https://maps.google.com/?q=-25.5631950887,-56.7043869823
COV08	701	679	607	425	https://maps.google.com/?q=-25.5738768032,-56.7074967516
COV08	690	670	598	420	https://maps.google.com/?q=-25.5761429619,-56.706687699
COV08	0	0	0	418	https://maps.google.com/?q=-25.5751679483,-56.7054940304
COV08	671	653	581	412	https://maps.google.com/?q=-25.5804071394,-56.7046555326
COV08	670	652	581	412	https://maps.google.com/?q=-25.5804644379,-56.704836699
COV08	656	639	568	405	https://maps.google.com/?q=-25.5840354626,-56.7029898859
COV08	638	622	552	397	https://maps.google.com/?q=-25.5884588944,-56.7011085909
COV08	609	597	527	383	https://maps.google.com/?q=-25.5963372064,-56.6989829585
COV08	597	586	517	378	https://maps.google.com/?q=-25.5978475056,-56.7024834912
COV08	605	593	524	382	https://maps.google.com/?q=-25.597311819,-56.6987199797
COV08	604	592	523	381	https://maps.google.com/?q=-25.5977491452,-56.6986016272
COV08	602	590	521	380	https://maps.google.com/?q=-25.5983182305,-56.698451779
COV08	593	582	514	376	https://maps.google.com/?q=-25.6008813221,-56.6977800487
COV08	583	573	505	371	https://maps.google.com/?q=-25.6039177491,-56.6969766573
COV08	581	571	503	370	https://maps.google.com/?q=-25.6046666586,-56.6967682948
COV08	572	563	496	366	https://maps.google.com/?q=-25.6073938582,-56.6960209349
COV08	0	0	0	343	https://maps.google.com/?q=-25.6092903278,-56.6802667558
COV08	0	0	0	319	https://maps.google.com/?q=-25.6158646586,-56.6607239934
COV08	0	0	0	301	https://maps.google.com/?q=-25.6082838291,-56.6539091758
COV08	0	0	0	306	https://maps.google.com/?q=-25.6201664843,-56.6560761557
COV08	0	0	0	341	https://maps.google.com/?q=-25.6087610869,-56.6793660238
COV08	569	560	492	364	https://maps.google.com/?q=-25.6086442697,-56.6959503147
COV08	560	552	485	360	https://maps.google.com/?q=-25.6105089533,-56.6986011634
COV08	554	547	480	357	https://maps.google.com/?q=-25.6135720624,-56.6956719894
COV08	0	0	0	353	https://maps.google.com/?q=-25.6146613992,-56.6989591122
COV08	538	532	466	349	https://maps.google.com/?q=-25.6194257707,-56.6953539441
COV08	537	531	465	349	https://maps.google.com/?q=-25.6196057738,-56.6953412836
COV08	530	525	459	345	https://maps.google.com/?q=-25.6223281274,-56.6953901739
COV08	0	0	0	329	https://maps.google.com/?q=-25.6105566668,-56.6888683333
COV08	511	507	443	336	https://maps.google.com/?q=-25.6291873256,-56.6968780887
COV08	0	0	0	331	https://maps.google.com/?q=-25.6308035698,-56.6928349278
COV08	511	507	442	336	https://maps.google.com/?q=-25.629350267,-56.6968209751
COV08	510	506	441	335	https://maps.google.com/?q=-25.6297351142,-56.6967384897
COV08	510	506	441	335	https://maps.google.com/?q=-25.6297455068,-56.6967412564

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV08	0	0	0	334	https://maps.google.com/?q=-25.6299393556,-56.6971438068
COV08	502	499	435	331	https://maps.google.com/?q=-25.6328651327,-56.6974953181
COV08	482	480	418	321	https://maps.google.com/?q=-25.6413870898,-56.6973175708
COV08	480	478	416	320	https://maps.google.com/?q=-25.6423402156,-56.6973040403
COV08	475	473	411	317	https://maps.google.com/?q=-25.6448582483,-56.6973663996
COV08	473	472	410	316	https://maps.google.com/?q=-25.6455629741,-56.6974032278
COV08	469	468	406	314	https://maps.google.com/?q=-25.6455789242,-56.6995311797
COV08	430	431	372	293	https://maps.google.com/?q=-25.6591082095,-56.7146315864
COV08	405	407	350	279	https://maps.google.com/?q=-25.6634941453,-56.7295330606
COV08	377	381	327	263	https://maps.google.com/?q=-25.6573708243,-56.7483730995
COV08	371	375	321	260	https://maps.google.com/?q=-25.6525505153,-56.74932086
COV08	0	0	0	253	https://maps.google.com/?q=-25.6584968261,-56.7569466631
COV08	370	374	320	259	https://maps.google.com/?q=-25.6522429068,-56.748509359
COV08	367	371	318	258	https://maps.google.com/?q=-25.6511033497,-56.746972886
COV08	367	371	318	258	https://maps.google.com/?q=-25.6510544395,-56.7470525925
COV08	367	371	318	258	https://maps.google.com/?q=-25.6510352759,-56.7468811036
COV08	362	366	314	255	https://maps.google.com/?q=-25.6474892256,-56.7481112593
COV08	358	362	310	252	https://maps.google.com/?q=-25.6470983514,-56.7516548828
COV08	371	375	321	260	https://maps.google.com/?q=-25.6617343276,-56.7509035822
COV08	404	407	350	279	https://maps.google.com/?q=-25.663373312,-56.7293626574
COV08	473	471	409	316	https://maps.google.com/?q=-25.6458565907,-56.6974059151
COV08	463	462	401	311	https://maps.google.com/?q=-25.6493938289,-56.6941340922
COV08	0	0	0	310	https://maps.google.com/?q=-25.6498537935,-56.6937554994
COV08	0	0	0	298	https://maps.google.com/?q=-25.6611786739,-56.6896893204
COV08	0	0	0	298	https://maps.google.com/?q=-25.6611289912,-56.6894522793
COV08	0	0	0	292	https://maps.google.com/?q=-25.666593154,-56.6896620328
COV08	0	0	0	282	https://maps.google.com/?q=-25.6776777257,-56.6908077287
COV08	0	0	0	268	https://maps.google.com/?q=-25.6701503061,-56.7076690135
COV08	0	0	0	282	https://maps.google.com/?q=-25.6780003169,-56.6908548034
COV08	0	0	0	279	https://maps.google.com/?q=-25.6767162138,-56.6879836628
COV08	0	0	0	275	https://maps.google.com/?q=-25.6851876777,-56.6898224441
COV08	0	0	0	269	https://maps.google.com/?q=-25.6900895456,-56.6961369817
COV08	0	0	0	271	https://maps.google.com/?q=-25.6892525162,-56.692760448
COV08	0	0	0	301	https://maps.google.com/?q=-25.6523334935,-56.6880091422
COV08	0	0	0	288	https://maps.google.com/?q=-25.6573405271,-56.6813844282
COV08	0	0	0	274	https://maps.google.com/?q=-25.6654401327,-56.6743565452
COV08	0	0	0	270	https://maps.google.com/?q=-25.6637030834,-56.6715625495
COV08	0	0	0	241	https://maps.google.com/?q=-25.6859116668,-56.65577
COV08	0	0	0	288	https://maps.google.com/?q=-25.6569946342,-56.6809893754
COV08	0	0	0	307	https://maps.google.com/?q=-25.6433227428,-56.6877136815
COV08	0	0	0	293	https://maps.google.com/?q=-25.6394653266,-56.6759293013
COV08	0	0	0	307	https://maps.google.com/?q=-25.6350722258,-56.707032421
COV08	0	0	0	307	https://maps.google.com/?q=-25.6349976742,-56.7071110477
COV08	0	0	0	300	https://maps.google.com/?q=-25.628658053,-56.7083342018
COV08	0	0	0	295	https://maps.google.com/?q=-25.6239631412,-56.7102489116
COV08	0	0	0	293	https://maps.google.com/?q=-25.6217658833,-56.7111182656
COV08	0	0	0	289	https://maps.google.com/?q=-25.622074389,-56.7147196545
COV08	0	0	0	291	https://maps.google.com/?q=-25.6225981807,-56.7062299482

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV08	0	0	0	292	https://maps.google.com/?q=-25.636931276,-56.7193921369
COV08	502	498	435	331	https://maps.google.com/?q=-25.6328817821,-56.6974540903
COV08	0	0	0	345	https://maps.google.com/?q=-25.6211709346,-56.6978803519
COV08	0	0	0	342	https://maps.google.com/?q=-25.6191500001,-56.6988516667
COV08	0	0	0	356	https://maps.google.com/?q=-25.610917563,-56.7062922145
COV08	592	581	513	375	https://maps.google.com/?q=-25.6001657451,-56.700686652
COV08	637	622	551	396	https://maps.google.com/?q=-25.5883657876,-56.7008555256
COV08	655	638	567	405	https://maps.google.com/?q=-25.5840040132,-56.7029189562
COV08	676	657	586	414	https://maps.google.com/?q=-25.5782022864,-56.7116695887
COV08	0	0	0	463	https://maps.google.com/?q=-25.5559307008,-56.7131867939
COV08	799	765	692	466	https://maps.google.com/?q=-25.5545335167,-56.7132608129
COV08	0	0	0	463	https://maps.google.com/?q=-25.5452225226,-56.7204455351
COV08	0	0	0	459	https://maps.google.com/?q=-25.5442514657,-56.7219094184
COV08	0	0	0	455	https://maps.google.com/?q=-25.5434539621,-56.7238357311
COV08	0	0	0	455	https://maps.google.com/?q=-25.5454767134,-56.7232658781
COV08	866	823	750	493	https://maps.google.com/?q=-25.5343065378,-56.7083330865
COV08	843	803	730	484	https://maps.google.com/?q=-25.5353354734,-56.7044549012
COV08	829	791	718	478	https://maps.google.com/?q=-25.5373923523,-56.7058819884
COV08	824	786	713	476	https://maps.google.com/?q=-25.5374412306,-56.7016631729
COV08	824	786	713	476	https://maps.google.com/?q=-25.5374420159,-56.70166216
COV08	823	786	713	476	https://maps.google.com/?q=-25.5375210466,-56.7015574162
COV08	791	758	685	463	https://maps.google.com/?q=-25.5416948572,-56.6972721284
COV08	0	0	0	450	https://maps.google.com/?q=-25.5415516744,-56.6931374151
COV08	0	0	0	428	https://maps.google.com/?q=-25.5393970888,-56.6858908484
COV08	0	0	0	415	https://maps.google.com/?q=-25.5347306633,-56.6843232524
COV08	0	0	0	424	https://maps.google.com/?q=-25.5394865363,-56.6841029816
COV08	0	0	0	417	https://maps.google.com/?q=-25.539935321,-56.6816114627
COV08	752	724	651	447	https://maps.google.com/?q=-25.5481955906,-56.6938434222
COV08	734	708	635	439	https://maps.google.com/?q=-25.5515682381,-56.6921611599
COV08	725	701	628	436	https://maps.google.com/?q=-25.5532210629,-56.6916183795
COV08	725	700	628	435	https://maps.google.com/?q=-25.5532856085,-56.6915973257
COV08	649	633	562	402	https://maps.google.com/?q=-25.5526413717,-56.6728807419
COV08	581	572	504	370	https://maps.google.com/?q=-25.5490457955,-56.6517667996
COV08	573	564	496	367	https://maps.google.com/?q=-25.5497506472,-56.6489560927
COV08	0	0	0	360	https://maps.google.com/?q=-25.5506966164,-56.6456894027
COV08	0	0	0	344	https://maps.google.com/?q=-25.5545646836,-56.638560921
COV08	0	0	0	327	https://maps.google.com/?q=-25.554365209,-56.6287107496
COV08	0	0	0	305	https://maps.google.com/?q=-25.5543236961,-56.614552324
COV08	0	0	0	300	https://maps.google.com/?q=-25.558136274,-56.6137520513
COV08	0	0	0	297	https://maps.google.com/?q=-25.5614356538,-56.6130548673
COV08	0	0	0	300	https://maps.google.com/?q=-25.5535785004,-56.6118014168
COV08	0	0	0	296	https://maps.google.com/?q=-25.552771885,-56.6088307559
COV08	0	0	0	295	https://maps.google.com/?q=-25.5524868047,-56.608527343
COV08	0	0	0	295	https://maps.google.com/?q=-25.5524759306,-56.6085486353
COV08	0	0	0	293	https://maps.google.com/?q=-25.5513501717,-56.6073177652
COV08	0	0	0	291	https://maps.google.com/?q=-25.5573462116,-56.6070088052
COV08	0	0	0	284	https://maps.google.com/?q=-25.5640357604,-56.6042477914
COV08	0	0	0	280	https://maps.google.com/?q=-25.5682442385,-56.6024570303

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV08	0	0	0	277	https://maps.google.com/?q=-25.5717680279,-56.6009045986
COV08	0	0	0	271	https://maps.google.com/?q=-25.5757168641,-56.5992621755
COV08	0	0	0	274	https://maps.google.com/?q=-25.5726104603,-56.604112042
COV08	0	0	0	268	https://maps.google.com/?q=-25.5784218196,-56.6070525554
COV08	0	0	0	267	https://maps.google.com/?q=-25.5787139186,-56.6068312317
COV08	0	0	0	255	https://maps.google.com/?q=-25.5863883334,-56.6005683333
COV08	0	0	0	261	https://maps.google.com/?q=-25.5827223745,-56.610480092
COV08	0	0	0	252	https://maps.google.com/?q=-25.5898052733,-56.611541943
COV08	0	0	0	241	https://maps.google.com/?q=-25.6047096272,-56.6155874791
COV08	0	0	0	231	https://maps.google.com/?q=-25.6194638584,-56.6134585613
COV08	0	0	0	224	https://maps.google.com/?q=-25.6285045071,-56.6138270872
COV08	0	0	0	220	https://maps.google.com/?q=-25.6334021378,-56.6137835705
COV08	0	0	0	222	https://maps.google.com/?q=-25.6276932739,-56.6179664093
COV08	0	0	0	220	https://maps.google.com/?q=-25.6313624148,-56.6193749524
COV08	0	0	0	218	https://maps.google.com/?q=-25.6335126236,-56.6184516983
COV08	0	0	0	217	https://maps.google.com/?q=-25.6343666306,-56.6213981336
COV08	0	0	0	213	https://maps.google.com/?q=-25.6343031742,-56.6305880737
COV08	0	0	0	221	https://maps.google.com/?q=-25.6257987184,-56.6182992161
COV08	0	0	0	287	https://maps.google.com/?q=-25.5473338429,-56.6099390806
COV08	0	0	0	337	https://maps.google.com/?q=-25.5509640763,-56.6375464886
COV08	0	0	0	354	https://maps.google.com/?q=-25.5477941621,-56.6465345088
COV08	558	550	483	359	https://maps.google.com/?q=-25.5547293245,-56.6495876028
COV08	555	548	481	358	https://maps.google.com/?q=-25.5550056881,-56.6504854515
COV08	550	543	476	355	https://maps.google.com/?q=-25.5575512095,-56.6489988917
COV08	547	540	474	354	https://maps.google.com/?q=-25.5577828013,-56.6500148296
COV08	542	535	469	351	https://maps.google.com/?q=-25.5604369319,-56.6484840573
COV08	540	534	468	351	https://maps.google.com/?q=-25.5605191307,-56.6489216154
COV08	492	489	426	326	https://maps.google.com/?q=-25.5716529997,-56.6372502057
COV08	491	489	425	326	https://maps.google.com/?q=-25.5719621033,-56.6373504082
COV08	479	477	415	319	https://maps.google.com/?q=-25.5767867953,-56.6347350318
COV08	476	474	412	318	https://maps.google.com/?q=-25.5760285182,-56.6333192624
COV08	472	470	408	315	https://maps.google.com/?q=-25.5787252067,-56.6314719819
COV08	0	0	0	398	https://maps.google.com/?q=-25.5546063553,-56.6739492933
COV08	0	0	0	417	https://maps.google.com/?q=-25.5593644475,-56.6890219768
COV08	0	0	0	387	https://maps.google.com/?q=-25.5678913746,-56.6808696204
COV08	0	0	0	367	https://maps.google.com/?q=-25.5744235305,-56.674745462
COV08	0	0	0	364	https://maps.google.com/?q=-25.5752862983,-56.6740193755
COV08	0	0	0	342	https://maps.google.com/?q=-25.5660519928,-56.6685932029
COV08	0	0	0	340	https://maps.google.com/?q=-25.5660962111,-56.667285364
COV08	0	0	0	336	https://maps.google.com/?q=-25.5661266783,-56.6639314651
COV08	0	0	0	332	https://maps.google.com/?q=-25.5694872187,-56.6635189015
COV08	0	0	0	352	https://maps.google.com/?q=-25.5789324287,-56.6694573775
COV08	0	0	0	344	https://maps.google.com/?q=-25.5804930331,-56.667154294
COV08	0	0	0	341	https://maps.google.com/?q=-25.5804420753,-56.6655573545
COV08	0	0	0	331	https://maps.google.com/?q=-25.580883369,-56.6601102423
COV08	0	0	0	323	https://maps.google.com/?q=-25.5828350373,-56.6528284307
COV08	0	0	0	340	https://maps.google.com/?q=-25.5809147591,-56.6655651103
COV08	0	0	0	326	https://maps.google.com/?q=-25.5875990078,-56.6644970905

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV08	0	0	0	321	https://maps.google.com/?q=-25.5896975287,-56.6627705899
COV08	0	0	0	320	https://maps.google.com/?q=-25.5898158459,-56.6625841319
COV08	0	0	0	316	https://maps.google.com/?q=-25.5873000001,-56.659485
COV08	0	0	0	308	https://maps.google.com/?q=-25.5946065808,-56.6579367706
COV08	0	0	0	306	https://maps.google.com/?q=-25.5943057719,-56.6561375463
COV08	0	0	0	303	https://maps.google.com/?q=-25.5942723607,-56.653070185
COV08	0	0	0	303	https://maps.google.com/?q=-25.5944167007,-56.6531484739
COV08	0	0	0	303	https://maps.google.com/?q=-25.5944312061,-56.6526618763
COV08	0	0	0	298	https://maps.google.com/?q=-25.5958264151,-56.649554227
COV08	0	0	0	321	https://maps.google.com/?q=-25.5906851423,-56.6675676996
COV08	0	0	0	321	https://maps.google.com/?q=-25.5907463656,-56.6674917233
COV08	0	0	0	317	https://maps.google.com/?q=-25.5923147906,-56.6700175921
COV08	725	700	628	435	https://maps.google.com/?q=-25.5532277342,-56.691673308
COV08	0	0	0	468	https://maps.google.com/?q=-25.5355691411,-56.6994632809
COV08	945	889	818	523	https://maps.google.com/?q=-25.5328960018,-56.7219428571
COV08	949	893	822	525	https://maps.google.com/?q=-25.5307892731,-56.723938623
COV08	922	869	799	512	https://maps.google.com/?q=-25.5260489666,-56.7256213317
COV08	911	859	789	507	https://maps.google.com/?q=-25.5261810985,-56.7284648613
COV08	890	840	771	497	https://maps.google.com/?q=-25.5264429292,-56.7339409625
COV08	887	838	768	496	https://maps.google.com/?q=-25.526476901,-56.7346602303
COV08	876	828	759	491	https://maps.google.com/?q=-25.5273432111,-56.7367774387
COV08	856	810	741	481	https://maps.google.com/?q=-25.5306652871,-56.7390424823
COV08	855	809	740	480	https://maps.google.com/?q=-25.5305256619,-56.7390520876
COV08	855	809	740	480	https://maps.google.com/?q=-25.5306758678,-56.7392898791
COV08	849	803	735	477	https://maps.google.com/?q=-25.529969437,-56.7403270397
COV08	0	0	0	471	https://maps.google.com/?q=-25.5270107167,-56.7406902361
COV08	0	0	0	460	https://maps.google.com/?q=-25.5220816302,-56.74045342
COV08	848	803	735	477	https://maps.google.com/?q=-25.5324235067,-56.7390386927
COV08	843	798	730	474	https://maps.google.com/?q=-25.5329524848,-56.7380486365
COV08	839	795	727	473	https://maps.google.com/?q=-25.5338687017,-56.7379741652
COV08	832	789	721	470	https://maps.google.com/?q=-25.5337488057,-56.7359688865
COV08	826	783	715	466	https://maps.google.com/?q=-25.5336147655,-56.7339471795
COV08	824	781	713	466	https://maps.google.com/?q=-25.533242583,-56.7339620537
COV08	821	778	711	464	https://maps.google.com/?q=-25.5335255641,-56.7323508678
COV08	814	773	705	461	https://maps.google.com/?q=-25.531748476,-56.7323674625
COV08	812	770	703	460	https://maps.google.com/?q=-25.5310259138,-56.7323772715
COV08	810	768	701	458	https://maps.google.com/?q=-25.5303509574,-56.7323778215
COV08	804	763	696	456	https://maps.google.com/?q=-25.5291632841,-56.7318592557
COV08	800	760	693	454	https://maps.google.com/?q=-25.5290769866,-56.731014003
COV08	790	751	684	450	https://maps.google.com/?q=-25.5288602095,-56.7288851262
COV08	790	751	684	450	https://maps.google.com/?q=-25.5303414228,-56.7303702928
COV08	789	751	683	450	https://maps.google.com/?q=-25.5303363436,-56.7302328996
COV08	783	746	678	448	https://maps.google.com/?q=-25.530247538,-56.7289801709
COV08	786	748	680	449	https://maps.google.com/?q=-25.5310014345,-56.7302119065
COV08	785	747	680	448	https://maps.google.com/?q=-25.5309983174,-56.7300875324
COV08	804	764	696	456	https://maps.google.com/?q=-25.5304071707,-56.733487616
COV08	0	0	0	456	https://maps.google.com/?q=-25.5306191607,-56.7334933227
COV08	798	759	691	454	https://maps.google.com/?q=-25.5304816466,-56.7346405655

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV08	812	771	703	460	https://maps.google.com/?q=-25.5316968052,-56.7319316793
COV08	810	769	702	459	https://maps.google.com/?q=-25.5316511462,-56.7315465785
COV08	810	769	701	459	https://maps.google.com/?q=-25.5317522919,-56.7315451225
COV08	817	775	707	462	https://maps.google.com/?q=-25.5334507763,-56.7311090853
COV08	807	766	699	458	https://maps.google.com/?q=-25.5320189782,-56.7306212461
COV08	815	773	706	461	https://maps.google.com/?q=-25.533414048,-56.7305051268
COV08	806	765	698	457	https://maps.google.com/?q=-25.5332666586,-56.7276999697
COV08	805	764	697	456	https://maps.google.com/?q=-25.5331416126,-56.7277715829
COV08	797	757	690	453	https://maps.google.com/?q=-25.5316132198,-56.7278771481
COV08	793	754	687	452	https://maps.google.com/?q=-25.5313416475,-56.7282546332
COV08	793	754	686	452	https://maps.google.com/?q=-25.531175693,-56.7282904483
COV08	801	761	694	455	https://maps.google.com/?q=-25.533174528,-56.7262560538
COV08	788	749	683	448	https://maps.google.com/?q=-25.5328960433,-56.7219435236
COV08	790	752	684	451	https://maps.google.com/?q=-25.5362110492,-56.7275753885
COV08	781	743	676	447	https://maps.google.com/?q=-25.5367501646,-56.7289848498
COV08	788	750	683	450	https://maps.google.com/?q=-25.5366052688,-56.727558708
COV08	813	771	704	460	https://maps.google.com/?q=-25.5357536924,-56.7323138739
COV08	812	771	704	460	https://maps.google.com/?q=-25.5358641995,-56.7323137247
COV08	807	766	699	458	https://maps.google.com/?q=-25.536818251,-56.7323270206
COV08	806	765	698	457	https://maps.google.com/?q=-25.536887947,-56.7326605083
COV08	798	759	691	454	https://maps.google.com/?q=-25.5385001995,-56.7323504611
COV08	0	0	0	453	https://maps.google.com/?q=-25.5392958419,-56.7323639726
COV08	0	0	0	431	https://maps.google.com/?q=-25.5491483828,-56.7359843459
COV08	0	0	0	403	https://maps.google.com/?q=-25.563844751,-56.7400400296
COV08	0	0	0	384	https://maps.google.com/?q=-25.5729071252,-56.747579111
COV08	0	0	0	379	https://maps.google.com/?q=-25.5707031477,-56.7507293188
COV08	0	0	0	369	https://maps.google.com/?q=-25.5807256841,-56.753967014
COV08	0	0	0	360	https://maps.google.com/?q=-25.5782983379,-56.7598152473
COV08	0	0	0	358	https://maps.google.com/?q=-25.5790947825,-56.7610079845
COV08	0	0	0	357	https://maps.google.com/?q=-25.5765619952,-56.7601713386
COV08	0	0	0	361	https://maps.google.com/?q=-25.5864418201,-56.7527886309
COV08	0	0	0	359	https://maps.google.com/?q=-25.5869948634,-56.7537653796
COV08	0	0	0	357	https://maps.google.com/?q=-25.5879392129,-56.7554332752
COV08	0	0	0	349	https://maps.google.com/?q=-25.5910057182,-56.7608044599
COV08	0	0	0	334	https://maps.google.com/?q=-25.6003972351,-56.7669764107
COV08	0	0	0	352	https://maps.google.com/?q=-25.5848018045,-56.757333009
COV08	0	0	0	361	https://maps.google.com/?q=-25.5864723706,-56.7527650688
COV08	0	0	0	360	https://maps.google.com/?q=-25.5868850594,-56.752397233
COV08	0	0	0	350	https://maps.google.com/?q=-25.5896176366,-56.7482569564
COV08	0	0	0	339	https://maps.google.com/?q=-25.5933095926,-56.7428589845
COV08	0	0	0	322	https://maps.google.com/?q=-25.5985978375,-56.7351160999
COV08	0	0	0	311	https://maps.google.com/?q=-25.6061073446,-56.7341437309
COV08	0	0	0	353	https://maps.google.com/?q=-25.5916321801,-56.7513825548
COV08	0	0	0	351	https://maps.google.com/?q=-25.5919829912,-56.753504996
COV08	0	0	0	336	https://maps.google.com/?q=-25.6001355793,-56.7525282875
COV08	0	0	0	334	https://maps.google.com/?q=-25.6010489295,-56.7541112709
COV08	0	0	0	330	https://maps.google.com/?q=-25.6027202513,-56.7570160817
COV08	0	0	0	317	https://maps.google.com/?q=-25.6129423337,-56.759677957

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV08	0	0	0	308	https://maps.google.com/?q=-25.6173066668,-56.7660466667
COV08	0	0	0	326	https://maps.google.com/?q=-25.6076996213,-56.7480506634
COV08	0	0	0	373	https://maps.google.com/?q=-25.5772122565,-56.7413227338
COV08	0	0	0	370	https://maps.google.com/?q=-25.5783814908,-56.739615439
COV08	0	0	0	370	https://maps.google.com/?q=-25.5785427652,-56.7397086604
COV08	0	0	0	370	https://maps.google.com/?q=-25.578661483,-56.7392065902
COV08	0	0	0	367	https://maps.google.com/?q=-25.5797461914,-56.7376226485
COV08	0	0	0	363	https://maps.google.com/?q=-25.5813816325,-56.7352740389
COV08	0	0	0	356	https://maps.google.com/?q=-25.5771526395,-56.7321115295
COV08	0	0	0	353	https://maps.google.com/?q=-25.5860367616,-56.7285882907
COV08	0	0	0	425	https://maps.google.com/?q=-25.5483997732,-56.7390760716
COV08	0	0	0	411	https://maps.google.com/?q=-25.5506168251,-56.7465502884
COV08	827	784	716	468	https://maps.google.com/?q=-25.5339877443,-56.740349799
COV08	815	774	706	463	https://maps.google.com/?q=-25.5348922785,-56.7416399014
COV08	822	780	712	466	https://maps.google.com/?q=-25.5340348,-56.741289064
COV08	837	793	725	472	https://maps.google.com/?q=-25.5342238594,-56.7379371131
COV08	823	782	713	467	https://maps.google.com/?q=-25.5366064757,-56.7376885387
COV08	810	770	702	461	https://maps.google.com/?q=-25.5389966497,-56.7374956278
COV08	808	768	699	461	https://maps.google.com/?q=-25.5389718081,-56.7370167885
COV08	807	767	699	460	https://maps.google.com/?q=-25.5395996763,-56.7374452362
COV08	804	765	696	459	https://maps.google.com/?q=-25.5401763936,-56.737424348
COV08	0	0	0	446	https://maps.google.com/?q=-25.5417505975,-56.7423948164
COV08	0	0	0	444	https://maps.google.com/?q=-25.54172928,-56.7434632201
COV08	0	0	0	445	https://maps.google.com/?q=-25.5423895616,-56.7424451823
COV08	740	710	641	433	https://maps.google.com/?q=-25.5496500929,-56.7444030877
COV08	848	803	734	477	https://maps.google.com/?q=-25.5324251688,-56.7390554503
COV08	836	792	724	471	https://maps.google.com/?q=-25.5319232846,-56.7424510743
COV08	836	792	724	471	https://maps.google.com/?q=-25.5318751339,-56.742572577
COV08	833	789	721	470	https://maps.google.com/?q=-25.5315889214,-56.7433559176
COV08	823	780	713	465	https://maps.google.com/?q=-25.5305171881,-56.7462069585
COV08	820	777	710	463	https://maps.google.com/?q=-25.5301475044,-56.7471238744
COV08	816	774	707	462	https://maps.google.com/?q=-25.5297475396,-56.7481946724
COV08	810	768	701	459	https://maps.google.com/?q=-25.5290129462,-56.7500130014
COV08	814	772	705	461	https://maps.google.com/?q=-25.5293885328,-56.7480373929
COV08	810	769	701	459	https://maps.google.com/?q=-25.5296011844,-56.7473155543
COV08	803	763	696	457	https://maps.google.com/?q=-25.5275817817,-56.7472458776
COV08	0	0	0	454	https://maps.google.com/?q=-25.5324888818,-56.7510943981
COV08	0	0	0	426	https://maps.google.com/?q=-25.5327281607,-56.7650394486
COV08	877	830	760	492	https://maps.google.com/?q=-25.5280474072,-56.7343908221
COV08	0	0	0	586	https://maps.google.com/?q=-25.5224700001,-56.69485
COV08	1058	994	916	587	https://maps.google.com/?q=-25.5224216668,-56.694525
COV08	0	0	0	605	https://maps.google.com/?q=-25.5200300001,-56.686545
COV08	0	0	0	611	https://maps.google.com/?q=-25.5194859146,-56.6835763868
COV08	0	0	0	624	https://maps.google.com/?q=-25.517775817,-56.6789901721
COV08	0	0	0	687	https://maps.google.com/?q=-25.5110920096,-56.6562194614
COV08	0	0	0	770	https://maps.google.com/?q=-25.5039680805,-56.6314117522
COV08	0	0	0	1201	https://maps.google.com/?q=-25.4825529452,-56.5597812179
COV08	2302	2159	1994	1370	https://maps.google.com/?q=-25.4771906177,-56.5434859294

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV08	0	0	0	1540	https://maps.google.com/?q=-25.4735066682,-56.5309303396
COV08	2557	2397	2215	1546	https://maps.google.com/?q=-25.4733903748,-56.5305631146
COV08	2593	2429	2245	1568	https://maps.google.com/?q=-25.4737416426,-56.5294797097
COV08	2299	2184	1991	1426	https://maps.google.com/?q=-25.4801531031,-56.529902785
COV08	0	0	0	965	https://maps.google.com/?q=-25.5115633793,-56.5322032079
COV08	0	0	0	1619	https://maps.google.com/?q=-25.4724515839,-56.5263835089
COV08	0	0	0	1506	https://maps.google.com/?q=-25.4677231986,-56.5267918657
COV08	2115	2045	1832	1378	https://maps.google.com/?q=-25.4869451889,-56.5186546597
COV08	0	0	0	1844	https://maps.google.com/?q=-25.4716919693,-56.5141645165
COV08	0	0	0	1905	https://maps.google.com/?q=-25.4714465915,-56.5114440526
COV08	3507	3279	3037	2247	https://maps.google.com/?q=-25.470471932,-56.4986367897
COV08	0	0	0	2267	https://maps.google.com/?q=-25.4703263453,-56.4977658753
COV08	3507	3291	3037	2269	https://maps.google.com/?q=-25.4706552515,-56.496938718
COV08	3374	3182	2922	2194	https://maps.google.com/?q=-25.4720619636,-56.4976776636
COV08	3223	3057	2791	2110	https://maps.google.com/?q=-25.4737390248,-56.4985417221
COV08	3153	2998	2730	2071	https://maps.google.com/?q=-25.4740756625,-56.4976171198
COV08	0	0	0	2098	https://maps.google.com/?q=-25.4739887821,-56.4986682363
COV08	0	0	0	1679	https://maps.google.com/?q=-25.4844075596,-56.5040373618
COV08	3339	3153	2891	2175	https://maps.google.com/?q=-25.4715488876,-56.4949940343
COV08	3942	3686	3414	2606	https://maps.google.com/?q=-25.4702905559,-56.4888719455
COV08	4064	3799	3519	2710	https://maps.google.com/?q=-25.4700476499,-56.4864690432
COV08	4089	3822	3541	2731	https://maps.google.com/?q=-25.4699460892,-56.4860865175
COV08	4562	4265	3951	3160	https://maps.google.com/?q=-25.4686624085,-56.478062026
COV08	4585	4294	3971	3195	https://maps.google.com/?q=-25.4680018822,-56.4770262155
COV08	0	0	0	3225	https://maps.google.com/?q=-25.4695423703,-56.4752459206
COV08	0	0	0	2969	https://maps.google.com/?q=-25.4722520012,-56.4758291355
COV08	0	0	0	2939	https://maps.google.com/?q=-25.4725941742,-56.4759191675
COV08	0	0	0	2818	https://maps.google.com/?q=-25.4730240312,-56.4743868717
COV08	0	0	0	2760	https://maps.google.com/?q=-25.4747357363,-56.4764404156
COV08	0	0	0	2397	https://maps.google.com/?q=-25.4799124882,-56.4776204912
COV08	0	0	0	1992	https://maps.google.com/?q=-25.4875797433,-56.4794406897
COV08	4898	4588	4242	3499	https://maps.google.com/?q=-25.4673628723,-56.4726821056
COV08	5320	4980	4607	3922	https://maps.google.com/?q=-25.466956922,-56.4679491797
COV08	5076	4783	4396	3729	https://maps.google.com/?q=-25.4682219005,-56.4686458765
COV08	4770	4530	4131	3497	https://maps.google.com/?q=-25.4698347422,-56.4696715577
COV08	5283	4945	4575	3883	https://maps.google.com/?q=-25.4668868007,-56.4675309127
COV08	0	0	0	5487	https://maps.google.com/?q=-25.4683794891,-56.4585799796
COV08	0	0	0	5316	https://maps.google.com/?q=-25.4689100193,-56.4589171809
COV08	0	0	0	5147	https://maps.google.com/?q=-25.468521961,-56.4595195656
COV08	7503	7411	6497	7208	https://maps.google.com/?q=-25.4672459805,-56.4528764972
COV08	7406	7267	6413	7023	https://maps.google.com/?q=-25.4667151528,-56.4527222809
COV08	8361	8939	7241	9132	https://maps.google.com/?q=-25.4708111618,-56.4495296176
COV08	8250	8635	7144	8751	https://maps.google.com/?q=-25.4714726344,-56.4493891107
COV08	8359	8934	7240	9126	https://maps.google.com/?q=-25.4708034411,-56.4495231002
COV09	9084	12880	7867	12566	https://maps.google.com/?q=-25.4727547707,-56.4483931372
COV09	8686	10134	7523	10455	https://maps.google.com/?q=-25.4708721541,-56.4488926995
COV09	8686	10133	7522	10454	https://maps.google.com/?q=-25.4708722459,-56.4488944463
COV09	8584	9714	7434	10024	https://maps.google.com/?q=-25.4703137528,-56.4487756549

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV09	8482	9348	7345	9620	https://maps.google.com/?q=-25.4703386604,-56.4483076637
COV09	8417	9138	7289	9377	https://maps.google.com/?q=-25.4706333334,-56.44798
COV09	8243	8643	7138	8766	https://maps.google.com/?q=-25.4714083334,-56.447045
COV09	7839	7750	6789	7557	https://maps.google.com/?q=-25.4735051241,-56.445226902
COV09	7679	7459	6650	7140	https://maps.google.com/?q=-25.4743631359,-56.4443198102
COV09	7626	7367	6605	7006	https://maps.google.com/?q=-25.4747594079,-56.4441828351
COV09	7443	7102	6446	6578	https://maps.google.com/?q=-25.4750559881,-56.4452339782
COV09	7139	6737	6183	5944	https://maps.google.com/?q=-25.4771071928,-56.4449093985
COV09	6818	6385	5905	5354	https://maps.google.com/?q=-25.4782896101,-56.4421169257
COV09	0	0	0	5054	https://maps.google.com/?q=-25.4770833334,-56.441715
COV09	6693	6253	5796	5143	https://maps.google.com/?q=-25.4786916093,-56.4409057461
COV09	6635	6193	5746	5049	https://maps.google.com/?q=-25.4788808432,-56.4403299675
COV09	6379	5934	5524	4655	https://maps.google.com/?q=-25.478625142,-56.4381610255
COV09	6228	5785	5394	4440	https://maps.google.com/?q=-25.4772012486,-56.4373903805
COV09	5939	5504	5144	4056	https://maps.google.com/?q=-25.4742805612,-56.4358096977
COV09	5797	5369	5021	3875	https://maps.google.com/?q=-25.4726924268,-56.4349502311
COV09	5720	5296	4954	3783	https://maps.google.com/?q=-25.4718329472,-56.4344891459
COV09	5699	5275	4935	3757	https://maps.google.com/?q=-25.4715927413,-56.4343426023
COV09	5631	5211	4877	3679	https://maps.google.com/?q=-25.4719317165,-56.4332372095
COV09	5432	5023	4704	3457	https://maps.google.com/?q=-25.4707207319,-56.4316319333
COV09	5333	4930	4619	3351	https://maps.google.com/?q=-25.4696022899,-56.4312486487
COV09	5333	4930	4618	3350	https://maps.google.com/?q=-25.469592762,-56.4312477655
COV09	5257	4866	4553	3300	https://maps.google.com/?q=-25.4696205196,-56.4305838418
COV09	5113	4744	4428	3205	https://maps.google.com/?q=-25.469737498,-56.4292926285
COV09	4894	4570	4238	3085	https://maps.google.com/?q=-25.4685249905,-56.4287316705
COV09	4649	4372	4026	2954	https://maps.google.com/?q=-25.4671090441,-56.4280901896
COV09	4870	4536	4218	3047	https://maps.google.com/?q=-25.4699052528,-56.4269650432
COV09	4865	4531	4213	3044	https://maps.google.com/?q=-25.4698704026,-56.426964634
COV09	4430	4154	3837	2767	https://maps.google.com/?q=-25.4702422242,-56.4222552408
COV09	4405	4132	3815	2751	https://maps.google.com/?q=-25.4702634734,-56.4219578964
COV09	4181	3948	3621	2636	https://maps.google.com/?q=-25.4686066446,-56.4219518761
COV09	4337	4073	3756	2709	https://maps.google.com/?q=-25.4702966668,-56.4211566667
COV09	4270	4014	3698	2667	https://maps.google.com/?q=-25.4703741379,-56.4203463612
COV09	4247	3994	3678	2653	https://maps.google.com/?q=-25.4704002997,-56.4200567791
COV09	4244	3991	3675	2651	https://maps.google.com/?q=-25.470377995,-56.4200553918
COV09	4143	3908	3588	2600	https://maps.google.com/?q=-25.469600074,-56.4200070068
COV09	3908	3712	3384	2479	https://maps.google.com/?q=-25.4680762606,-56.4195069117
COV09	3831	3648	3318	2440	https://maps.google.com/?q=-25.4674227117,-56.4194563763
COV09	0	0	0	2292	https://maps.google.com/?q=-25.4666158623,-56.4215797157
COV09	3627	3474	3141	2334	https://maps.google.com/?q=-25.4657105621,-56.4194947746
COV09	3524	3385	3052	2281	https://maps.google.com/?q=-25.4647254029,-56.4194391092
COV09	3365	3246	2914	2197	https://maps.google.com/?q=-25.4634263982,-56.4185291961
COV09	3335	3221	2888	2181	https://maps.google.com/?q=-25.46311617,-56.4184819762
COV09	3270	3164	2832	2147	https://maps.google.com/?q=-25.4624192198,-56.4183788417
COV09	3224	3123	2792	2122	https://maps.google.com/?q=-25.4618991408,-56.4183354471
COV09	3159	3066	2736	2087	https://maps.google.com/?q=-25.4612007655,-56.418234915
COV09	2920	2853	2528	1958	https://maps.google.com/?q=-25.458693543,-56.4180790827
COV09	2872	2810	2487	1932	https://maps.google.com/?q=-25.4580508275,-56.418016516

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV09	2719	2672	2355	1847	https://maps.google.com/?q=-25.4560430362,-56.4176303421
COV09	2432	2409	2106	1684	https://maps.google.com/?q=-25.4564906244,-56.4123597884
COV09	0	0	0	1645	https://maps.google.com/?q=-25.4575409585,-56.4120179777
COV09	0	0	0	1579	https://maps.google.com/?q=-25.4598269971,-56.4121312852
COV09	0	0	0	1548	https://maps.google.com/?q=-25.4609532732,-56.4122407514
COV09	0	0	0	1533	https://maps.google.com/?q=-25.4609344152,-56.4128883128
COV09	0	0	0	1500	https://maps.google.com/?q=-25.4596783334,-56.4127933333
COV09	0	0	0	1503	https://maps.google.com/?q=-25.4620733334,-56.4129616667
COV09	0	0	0	1529	https://maps.google.com/?q=-25.4616716668,-56.4123083333
COV09	0	0	0	1501	https://maps.google.com/?q=-25.4625316668,-56.4126466667
COV09	0	0	0	1526	https://maps.google.com/?q=-25.4616376182,-56.4121877554
COV09	2295	2282	1987	1604	https://maps.google.com/?q=-25.4567398548,-56.4094240208
COV09	2269	2258	1965	1589	https://maps.google.com/?q=-25.4567901606,-56.4088280047
COV09	0	0	0	1527	https://maps.google.com/?q=-25.4569373131,-56.4062967112
COV09	0	0	0	1507	https://maps.google.com/?q=-25.4569862843,-56.4054541471
COV09	0	0	0	1438	https://maps.google.com/?q=-25.4572186348,-56.4023210781
COV09	0	0	0	1315	https://maps.google.com/?q=-25.4576916086,-56.3959675104
COV09	0	0	0	1153	https://maps.google.com/?q=-25.4584631037,-56.385691972
COV09	0	0	0	1121	https://maps.google.com/?q=-25.4586437898,-56.3833055361
COV09	0	0	0	1063	https://maps.google.com/?q=-25.4589968728,-56.3786406432
COV09	0	0	0	1056	https://maps.google.com/?q=-25.4590175644,-56.3780789804
COV09	0	0	0	1018	https://maps.google.com/?q=-25.459558094,-56.374927362
COV09	0	0	0	1000	https://maps.google.com/?q=-25.4610637456,-56.3751622187
COV09	0	0	0	847	https://maps.google.com/?q=-25.4497878326,-56.3615214033
COV09	0	0	0	942	https://maps.google.com/?q=-25.4493105665,-56.3755043203
COV09	0	0	0	1106	https://maps.google.com/?q=-25.4596925134,-56.3833104028
COV09	0	0	0	1505	https://maps.google.com/?q=-25.4568732066,-56.4054496761
COV09	0	0	0	1522	https://maps.google.com/?q=-25.4567537335,-56.4062809728
COV09	2231	2223	1932	1567	https://maps.google.com/?q=-25.4575937292,-56.4088390001
COV09	0	0	0	2048	https://maps.google.com/?q=-25.4610410889,-56.4192196994
COV09	0	0	0	2003	https://maps.google.com/?q=-25.4608742442,-56.4203487362
COV09	0	0	0	1944	https://maps.google.com/?q=-25.4606460211,-56.4218930197
COV09	0	0	0	2023	https://maps.google.com/?q=-25.4604683334,-56.4191516667
COV09	3335	3221	2888	2181	https://maps.google.com/?q=-25.4633959415,-56.4188733299
COV09	3329	3215	2883	2178	https://maps.google.com/?q=-25.4633265293,-56.4188689039
COV09	3314	3202	2870	2170	https://maps.google.com/?q=-25.4633732482,-56.4191192654
COV09	3162	3068	2738	2089	https://maps.google.com/?q=-25.4632000001,-56.4209966667
COV09	3130	3040	2711	2072	https://maps.google.com/?q=-25.4628485547,-56.4208529348
COV09	2973	2901	2575	1987	https://maps.google.com/?q=-25.4623083334,-56.4229133333
COV09	0	0	0	2063	https://maps.google.com/?q=-25.4626943488,-56.4207232979
COV09	0	0	0	2060	https://maps.google.com/?q=-25.4626807889,-56.4207911429
COV09	3034	2955	2627	2020	https://maps.google.com/?q=-25.4630333334,-56.4225383333
COV09	4086	3852	3538	2553	https://maps.google.com/?q=-25.4705236969,-56.4179837153
COV09	3971	3750	3439	2482	https://maps.google.com/?q=-25.4706170948,-56.4164143082
COV09	3594	3433	3113	2291	https://maps.google.com/?q=-25.4672354763,-56.416185089
COV09	0	0	0	2275	https://maps.google.com/?q=-25.4669430121,-56.4161653383
COV09	3461	3319	2997	2222	https://maps.google.com/?q=-25.4665165415,-56.4168826458
COV09	3258	3143	2822	2117	https://maps.google.com/?q=-25.4643534857,-56.4166806424

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV09	3122	3024	2704	2046	https://maps.google.com/?q=-25.4636476399,-56.4159041793
COV09	0	0	0	2010	https://maps.google.com/?q=-25.4637566668,-56.4149933333
COV09	3012	2927	2609	1988	https://maps.google.com/?q=-25.4622883334,-56.4159883333
COV09	3949	3730	3420	2468	https://maps.google.com/?q=-25.4706347991,-56.4161051678
COV09	3842	3635	3327	2403	https://maps.google.com/?q=-25.4707232654,-56.4145602109
COV09	3805	3605	3295	2384	https://maps.google.com/?q=-25.4703959543,-56.4145580562
COV09	3827	3622	3314	2393	https://maps.google.com/?q=-25.4707358985,-56.4143364168
COV09	3739	3543	3238	2339	https://maps.google.com/?q=-25.4708115609,-56.4129956578
COV09	3212	3093	2781	2073	https://maps.google.com/?q=-25.4653729643,-56.4126486024
COV09	3186	3071	2760	2060	https://maps.google.com/?q=-25.4654153785,-56.4129704529
COV09	3185	3070	2758	2059	https://maps.google.com/?q=-25.4650581281,-56.4126285124
COV09	0	0	0	2057	https://maps.google.com/?q=-25.4650556353,-56.41266398
COV09	3180	3066	2754	2056	https://maps.google.com/?q=-25.4650005764,-56.41262484
COV09	0	0	0	2043	https://maps.google.com/?q=-25.4650156151,-56.4129704105
COV09	3159	3047	2736	2045	https://maps.google.com/?q=-25.4647554236,-56.4126091966
COV09	3147	3037	2725	2039	https://maps.google.com/?q=-25.4646078457,-56.4125997796
COV09	3126	3019	2707	2028	https://maps.google.com/?q=-25.4643608638,-56.4125840799
COV09	0	0	0	2039	https://maps.google.com/?q=-25.4646079059,-56.4125926672
COV09	0	0	0	2045	https://maps.google.com/?q=-25.4647543766,-56.4126151049
COV09	3596	3415	3114	2252	https://maps.google.com/?q=-25.4709414858,-56.4106928391
COV09	3534	3360	3060	2214	https://maps.google.com/?q=-25.4710007045,-56.4096430206
COV09	3421	3264	2962	2158	https://maps.google.com/?q=-25.4698254204,-56.4095743145
COV09	3366	3208	2915	2112	https://maps.google.com/?q=-25.4711708157,-56.4066265677
COV09	0	0	0	1962	https://maps.google.com/?q=-25.4676150001,-56.40642
COV09	3150	3012	2728	1981	https://maps.google.com/?q=-25.4714148467,-56.4022974145
COV09	3089	2960	2676	1951	https://maps.google.com/?q=-25.4706635688,-56.402221861
COV09	3116	2982	2699	1961	https://maps.google.com/?q=-25.471454966,-56.4015854729
COV09	0	0	0	1847	https://maps.google.com/?q=-25.4684216609,-56.4014943535
COV09	2988	2864	2587	1882	https://maps.google.com/?q=-25.4716314759,-56.3986817895
COV09	2971	2848	2573	1872	https://maps.google.com/?q=-25.4716568032,-56.3982827915
COV09	2909	2792	2519	1835	https://maps.google.com/?q=-25.4717516455,-56.3967885255
COV09	2873	2759	2488	1813	https://maps.google.com/?q=-25.471811877,-56.3958861418
COV09	2778	2671	2405	1755	https://maps.google.com/?q=-25.4719770051,-56.3934117765
COV09	2611	2517	2261	1654	https://maps.google.com/?q=-25.4722942508,-56.3886562234
COV09	2463	2380	2133	1564	https://maps.google.com/?q=-25.4725915588,-56.3839334708
COV09	1893	1869	1640	1272	https://maps.google.com/?q=-25.4604550944,-56.3768586826
COV09	1877	1854	1626	1263	https://maps.google.com/?q=-25.4605683334,-56.3763383333
COV09	2107	2047	1825	1347	https://maps.google.com/?q=-25.4716602645,-56.3699926828
COV09	0	0	0	1294	https://maps.google.com/?q=-25.4688580721,-56.3695527987
COV09	1580	1548	1368	1022	https://maps.google.com/?q=-25.4715991967,-56.3381110147
COV09	1426	1400	1235	925	https://maps.google.com/?q=-25.4727005034,-56.324434811
COV09	1424	1398	1233	924	https://maps.google.com/?q=-25.4727170432,-56.3242441276
COV09	1388	1364	1202	902	https://maps.google.com/?q=-25.4730048629,-56.3206710431
COV09	1340	1317	1160	871	https://maps.google.com/?q=-25.4734372627,-56.3154641641
COV09	1227	1214	1062	814	https://maps.google.com/?q=-25.4659949801,-56.3158769195
COV09	1289	1269	1117	840	https://maps.google.com/?q=-25.4739177146,-56.3096759885
COV09	0	0	0	777	https://maps.google.com/?q=-25.4652183341,-56.3087169656
COV09	0	0	0	764	https://maps.google.com/?q=-25.4642621979,-56.3106192712

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV09	0	0	0	772	https://maps.google.com/?q=-25.4644131175,-56.3086282045
COV09	0	0	0	769	https://maps.google.com/?q=-25.4645280484,-56.3080596418
COV09	0	0	0	748	https://maps.google.com/?q=-25.4607057753,-56.3082224501
COV09	0	0	0	733	https://maps.google.com/?q=-25.458239812,-56.3077070667
COV09	0	0	0	679	https://maps.google.com/?q=-25.4545251034,-56.315794765
COV09	0	0	0	675	https://maps.google.com/?q=-25.4478784216,-56.3071408778
COV09	0	0	0	641	https://maps.google.com/?q=-25.4408028753,-56.3067188866
COV09	0	0	0	641	https://maps.google.com/?q=-25.4408006297,-56.3067767162
COV09	0	0	0	639	https://maps.google.com/?q=-25.4404884827,-56.3067001488
COV09	0	0	0	611	https://maps.google.com/?q=-25.4408620589,-56.2995349975
COV09	0	0	0	633	https://maps.google.com/?q=-25.4389917361,-56.3066109435
COV09	0	0	0	622	https://maps.google.com/?q=-25.4365808587,-56.3064672602
COV09	0	0	0	621	https://maps.google.com/?q=-25.4365788458,-56.3063302155
COV09	0	0	0	602	https://maps.google.com/?q=-25.431817416,-56.3061833823
COV09	0	0	0	561	https://maps.google.com/?q=-25.4229987649,-56.3078090607
COV09	0	0	0	544	https://maps.google.com/?q=-25.4180746849,-56.3076196238
COV09	0	0	0	544	https://maps.google.com/?q=-25.4179741116,-56.3076495537
COV09	0	0	0	529	https://maps.google.com/?q=-25.4182357389,-56.3028963113
COV09	0	0	0	541	https://maps.google.com/?q=-25.4179383312,-56.3083846011
COV09	0	0	0	541	https://maps.google.com/?q=-25.4178203765,-56.308383531
COV09	0	0	0	539	https://maps.google.com/?q=-25.4179073953,-56.3090200639
COV09	0	0	0	521	https://maps.google.com/?q=-25.4175901771,-56.3154170348
COV09	0	0	0	506	https://maps.google.com/?q=-25.4173559817,-56.3209172744
COV09	0	0	0	504	https://maps.google.com/?q=-25.4173594172,-56.3213671874
COV09	0	0	0	500	https://maps.google.com/?q=-25.4173713945,-56.3229371416
COV09	0	0	0	479	https://maps.google.com/?q=-25.4205921316,-56.3303770359
COV09	0	0	0	450	https://maps.google.com/?q=-25.4296500001,-56.3304333333
COV09	0	0	0	463	https://maps.google.com/?q=-25.401883287,-56.3216280748
COV09	0	0	0	452	https://maps.google.com/?q=-25.3973590206,-56.3229681256
COV09	0	0	0	430	https://maps.google.com/?q=-25.3877334288,-56.3258187854
COV09	0	0	0	429	https://maps.google.com/?q=-25.3876261206,-56.3257908753
COV09	0	0	0	429	https://maps.google.com/?q=-25.3875455095,-56.3254642221
COV09	0	0	0	409	https://maps.google.com/?q=-25.3850610218,-56.3153948682
COV09	0	0	0	393	https://maps.google.com/?q=-25.3828366634,-56.3064058765
COV09	0	0	0	387	https://maps.google.com/?q=-25.3865352306,-56.3052516095
COV09	0	0	0	374	https://maps.google.com/?q=-25.3935873641,-56.3031141699
COV09	0	0	0	361	https://maps.google.com/?q=-25.4020341896,-56.3005567983
COV09	0	0	0	393	https://maps.google.com/?q=-25.3826259167,-56.3064676397
COV09	0	0	0	389	https://maps.google.com/?q=-25.3805733337,-56.3071466664
COV09	0	0	0	378	https://maps.google.com/?q=-25.3739633599,-56.3090822779
COV09	1262	1242	1093	822	https://maps.google.com/?q=-25.4730923014,-56.3065149207
COV09	1243	1224	1076	811	https://maps.google.com/?q=-25.4719889964,-56.304463753
COV09	1232	1213	1067	803	https://maps.google.com/?q=-25.4722035852,-56.3029981858
COV09	1182	1165	1023	772	https://maps.google.com/?q=-25.4709738572,-56.2965740267
COV09	1127	1112	976	737	https://maps.google.com/?q=-25.4711122929,-56.2889266825
COV09	1116	1102	967	730	https://maps.google.com/?q=-25.4723297053,-56.2878007576
COV09	1090	1076	944	713	https://maps.google.com/?q=-25.4753503106,-56.2850069961
COV09	1089	1075	943	713	https://maps.google.com/?q=-25.4753065603,-56.2849292037

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV09	1069	1056	926	701	https://maps.google.com/?q=-25.475705631,-56.2816225849
COV09	1064	1051	922	697	https://maps.google.com/?q=-25.4765090253,-56.2816349407
COV09	1067	1054	924	699	https://maps.google.com/?q=-25.4757341257,-56.28121801
COV09	1000	989	866	657	https://maps.google.com/?q=-25.4766039702,-56.2688600001
COV09	989	978	856	649	https://maps.google.com/?q=-25.4767669393,-56.2665430045
COV09	967	957	837	635	https://maps.google.com/?q=-25.4770850503,-56.2620187755
COV09	943	934	817	620	https://maps.google.com/?q=-25.4764193513,-56.2569318102
COV09	0	0	0	620	https://maps.google.com/?q=-25.4762720778,-56.2569438902
COV09	908	899	786	597	https://maps.google.com/?q=-25.4753249151,-56.248716047
COV09	888	880	769	585	https://maps.google.com/?q=-25.4743957524,-56.2440958515
COV09	0	0	0	584	https://maps.google.com/?q=-25.4740626436,-56.2442036671
COV09	849	841	735	560	https://maps.google.com/?q=-25.4725065504,-56.234069573
COV09	811	806	702	540	https://maps.google.com/?q=-25.4669093636,-56.2344183747
COV09	823	816	713	543	https://maps.google.com/?q=-25.4729581848,-56.2269363005
COV09	822	815	712	543	https://maps.google.com/?q=-25.4727489727,-56.2268400621
COV09	819	812	709	541	https://maps.google.com/?q=-25.4723033342,-56.2266416674
COV09	809	803	700	536	https://maps.google.com/?q=-25.4708083336,-56.2259383341
COV09	745	743	645	502	https://maps.google.com/?q=-25.4602014899,-56.2223696793
COV09	0	0	0	476	https://maps.google.com/?q=-25.4615809287,-56.2117514169
COV09	737	736	638	498	https://maps.google.com/?q=-25.4587535411,-56.2221964429
COV09	0	0	0	498	https://maps.google.com/?q=-25.4587766609,-56.2220997088
COV09	734	733	635	496	https://maps.google.com/?q=-25.4580484619,-56.222142625
COV09	705	706	610	480	https://maps.google.com/?q=-25.452165205,-56.2215737863
COV09	668	671	579	460	https://maps.google.com/?q=-25.4440962918,-56.2208294656
COV09	663	666	574	457	https://maps.google.com/?q=-25.4428757176,-56.2207168805
COV09	0	0	0	433	https://maps.google.com/?q=-25.4417212446,-56.2327205287
COV09	0	0	0	428	https://maps.google.com/?q=-25.4393313948,-56.2324970618
COV09	0	0	0	413	https://maps.google.com/?q=-25.4320642854,-56.2318175854
COV09	0	0	0	413	https://maps.google.com/?q=-25.4318778954,-56.2318001588
COV09	0	0	0	412	https://maps.google.com/?q=-25.4317121649,-56.2317846638
COV09	0	0	0	412	https://maps.google.com/?q=-25.4313959327,-56.2317550978
COV09	0	0	0	400	https://maps.google.com/?q=-25.4248845569,-56.231146348
COV09	0	0	0	377	https://maps.google.com/?q=-25.4128147269,-56.2337046619
COV09	0	0	0	358	https://maps.google.com/?q=-25.4032017644,-56.2383879181
COV09	0	0	0	349	https://maps.google.com/?q=-25.3969871674,-56.2401616537
COV09	0	0	0	342	https://maps.google.com/?q=-25.3915508045,-56.2416918877
COV09	0	0	0	335	https://maps.google.com/?q=-25.3893843644,-56.2463494024
COV09	0	0	0	305	https://maps.google.com/?q=-25.3735763946,-56.267831614
COV09	0	0	0	302	https://maps.google.com/?q=-25.3762817358,-56.2671164578
COV09	0	0	0	290	https://maps.google.com/?q=-25.3867233708,-56.2634400765
COV09	0	0	0	289	https://maps.google.com/?q=-25.3865483333,-56.2620649999
COV09	0	0	0	290	https://maps.google.com/?q=-25.3869801107,-56.263371178
COV09	0	0	0	278	https://maps.google.com/?q=-25.3992528123,-56.2596649693
COV09	0	0	0	305	https://maps.google.com/?q=-25.3731284728,-56.2679483233
COV09	0	0	0	304	https://maps.google.com/?q=-25.3732634171,-56.2687234219
COV09	0	0	0	304	https://maps.google.com/?q=-25.3734340937,-56.268649655
COV09	0	0	0	303	https://maps.google.com/?q=-25.3734521287,-56.2695620858
COV09	0	0	0	303	https://maps.google.com/?q=-25.3737764932,-56.269445645

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV09	0	0	0	293	https://maps.google.com/?q=-25.3736683438,-56.2783428333
COV09	0	0	0	304	https://maps.google.com/?q=-25.3729628126,-56.2673303978
COV09	0	0	0	304	https://maps.google.com/?q=-25.3731309495,-56.267252015
COV09	0	0	0	295	https://maps.google.com/?q=-25.3705761678,-56.2584292777
COV09	0	0	0	284	https://maps.google.com/?q=-25.3605135549,-56.2597694786
COV09	0	0	0	277	https://maps.google.com/?q=-25.3554348592,-56.2547202911
COV09	0	0	0	273	https://maps.google.com/?q=-25.3510598726,-56.2563751914
COV09	0	0	0	268	https://maps.google.com/?q=-25.346071152,-56.2555888105
COV09	0	0	0	263	https://maps.google.com/?q=-25.340532952,-56.2553590016
COV09	0	0	0	259	https://maps.google.com/?q=-25.3350964929,-56.2576055306
COV09	0	0	0	257	https://maps.google.com/?q=-25.3347358306,-56.2595827077
COV09	0	0	0	251	https://maps.google.com/?q=-25.3367271746,-56.2675498542
COV09	0	0	0	253	https://maps.google.com/?q=-25.3302021363,-56.2610149014
COV09	0	0	0	249	https://maps.google.com/?q=-25.3251789581,-56.2627652422
COV09	0	0	0	253	https://maps.google.com/?q=-25.330891667,-56.2511183334
COV09	0	0	0	294	https://maps.google.com/?q=-25.363756007,-56.2709718865
COV09	0	0	0	294	https://maps.google.com/?q=-25.3638061448,-56.2711486027
COV09	0	0	0	294	https://maps.google.com/?q=-25.3633956656,-56.2710881227
COV09	0	0	0	284	https://maps.google.com/?q=-25.3532418972,-56.2743631363
COV09	0	0	0	283	https://maps.google.com/?q=-25.35354347,-56.2752131827
COV09	0	0	0	277	https://maps.google.com/?q=-25.3459037993,-56.2767296054
COV09	0	0	0	268	https://maps.google.com/?q=-25.3361312214,-56.2798806862
COV09	0	0	0	267	https://maps.google.com/?q=-25.3346230892,-56.2803669205
COV09	0	0	0	255	https://maps.google.com/?q=-25.3419675786,-56.2933277272
COV09	0	0	0	342	https://maps.google.com/?q=-25.3915301669,-56.2417022151
COV09	0	0	0	340	https://maps.google.com/?q=-25.3901180626,-56.2421652906
COV09	0	0	0	339	https://maps.google.com/?q=-25.3901628057,-56.2425231932
COV09	0	0	0	323	https://maps.google.com/?q=-25.3773485764,-56.2459491618
COV09	0	0	0	310	https://maps.google.com/?q=-25.366513282,-56.2494476658
COV09	0	0	0	298	https://maps.google.com/?q=-25.3594752283,-56.2414310128
COV09	0	0	0	295	https://maps.google.com/?q=-25.3568286046,-56.2422476964
COV09	0	0	0	405	https://maps.google.com/?q=-25.4312166665,-56.2359716673
COV09	0	0	0	412	https://maps.google.com/?q=-25.4318953886,-56.2315965491
COV09	0	0	0	414	https://maps.google.com/?q=-25.4507011686,-56.2337809654
COV09	654	657	566	452	https://maps.google.com/?q=-25.440575721,-56.2204209248
COV09	635	639	550	441	https://maps.google.com/?q=-25.4358538557,-56.2198133629
COV09	633	637	548	440	https://maps.google.com/?q=-25.435364655,-56.2197504199
COV09	0	0	0	440	https://maps.google.com/?q=-25.4353480362,-56.219960438
COV09	0	0	0	439	https://maps.google.com/?q=-25.4353247196,-56.2202550922
COV09	627	632	543	437	https://maps.google.com/?q=-25.4339219702,-56.2195647997
COV09	0	0	0	437	https://maps.google.com/?q=-25.4339467737,-56.2193653019
COV09	623	628	540	435	https://maps.google.com/?q=-25.4329041121,-56.2194338414
COV09	611	617	529	428	https://maps.google.com/?q=-25.4295347896,-56.2190003562
COV09	604	610	523	424	https://maps.google.com/?q=-25.427616576,-56.2187535753
COV09	597	603	517	419	https://maps.google.com/?q=-25.4255623615,-56.2184893055
COV09	596	602	516	419	https://maps.google.com/?q=-25.4251429749,-56.2184353534
COV09	565	572	489	400	https://maps.google.com/?q=-25.426035842,-56.207996596
COV09	0	0	0	398	https://maps.google.com/?q=-25.4249349465,-56.2079712784

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV09	0	0	0	395	https://maps.google.com/?q=-25.4231400001,-56.2079299999
COV09	0	0	0	387	https://maps.google.com/?q=-25.4186916668,-56.207665
COV09	556	563	481	395	https://maps.google.com/?q=-25.4290122553,-56.2081785087
COV09	0	0	0	395	https://maps.google.com/?q=-25.4290016715,-56.2085220872
COV09	551	559	477	392	https://maps.google.com/?q=-25.4304941529,-56.208269082
COV09	548	556	474	390	https://maps.google.com/?q=-25.4316632835,-56.2083405402
COV09	0	0	0	390	https://maps.google.com/?q=-25.431573859,-56.20871621
COV09	546	554	473	389	https://maps.google.com/?q=-25.4323897804,-56.2083849449
COV09	0	0	0	377	https://maps.google.com/?q=-25.430695335,-56.2009966492
COV09	0	0	0	366	https://maps.google.com/?q=-25.4288889892,-56.1931224345
COV09	0	0	0	360	https://maps.google.com/?q=-25.4280073691,-56.1892691576
COV09	0	0	0	360	https://maps.google.com/?q=-25.4279468509,-56.1889840478
COV09	0	0	0	343	https://maps.google.com/?q=-25.4252881512,-56.1764711694
COV09	0	0	0	332	https://maps.google.com/?q=-25.4231936083,-56.1672410752
COV09	0	0	0	329	https://maps.google.com/?q=-25.4226908606,-56.1650260246
COV09	0	0	0	324	https://maps.google.com/?q=-25.4217209601,-56.1607527857
COV09	0	0	0	317	https://maps.google.com/?q=-25.4275424678,-56.1593968532
COV09	0	0	0	317	https://maps.google.com/?q=-25.4275073221,-56.159268383
COV09	0	0	0	314	https://maps.google.com/?q=-25.4304260373,-56.158726259
COV09	0	0	0	323	https://maps.google.com/?q=-25.4214116808,-56.1593863092
COV09	0	0	0	323	https://maps.google.com/?q=-25.4215749825,-56.1593180066
COV09	0	0	0	319	https://maps.google.com/?q=-25.4201260388,-56.1585652161
COV09	0	0	0	342	https://maps.google.com/?q=-25.4245441521,-56.1766939695
COV09	0	0	0	342	https://maps.google.com/?q=-25.4244429359,-56.1767242798
COV09	0	0	0	329	https://maps.google.com/?q=-25.4147620575,-56.1796230633
COV09	0	0	0	318	https://maps.google.com/?q=-25.4064138727,-56.1807026728
COV09	0	0	0	311	https://maps.google.com/?q=-25.4051942323,-56.1743876011
COV09	0	0	0	304	https://maps.google.com/?q=-25.4059141342,-56.1675573408
COV09	0	0	0	294	https://maps.google.com/?q=-25.4093646689,-56.1578588431
COV09	0	0	0	291	https://maps.google.com/?q=-25.4108821021,-56.1550659943
COV09	0	0	0	290	https://maps.google.com/?q=-25.4111057047,-56.1547823687
COV09	0	0	0	289	https://maps.google.com/?q=-25.4121633335,-56.1557983334
COV09	0	0	0	288	https://maps.google.com/?q=-25.412752034,-56.1526940504
COV09	0	0	0	286	https://maps.google.com/?q=-25.4137375741,-56.1514438768
COV09	0	0	0	279	https://maps.google.com/?q=-25.417601677,-56.1441244486
COV09	0	0	0	279	https://maps.google.com/?q=-25.4170929228,-56.1439005107
COV09	0	0	0	275	https://maps.google.com/?q=-25.419660407,-56.1397269458
COV09	0	0	0	266	https://maps.google.com/?q=-25.4198351728,-56.1280796722
COV09	0	0	0	261	https://maps.google.com/?q=-25.4214386788,-56.1224523534
COV09	0	0	0	261	https://maps.google.com/?q=-25.4217625636,-56.1213266631
COV09	0	0	0	257	https://maps.google.com/?q=-25.4221389008,-56.1162189091
COV09	0	0	0	252	https://maps.google.com/?q=-25.4248985779,-56.1098077087
COV09	0	0	0	255	https://maps.google.com/?q=-25.4197650001,-56.1152966668
COV09	0	0	0	250	https://maps.google.com/?q=-25.4132039978,-56.1128772758
COV09	0	0	0	245	https://maps.google.com/?q=-25.4135046877,-56.1080121584
COV09	0	0	0	245	https://maps.google.com/?q=-25.4132966415,-56.1207460231
COV09	0	0	0	243	https://maps.google.com/?q=-25.4040765487,-56.1109306919
COV09	0	0	0	238	https://maps.google.com/?q=-25.4044269389,-56.1034726965

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV09	0	0	0	237	https://maps.google.com/?q=-25.4053255418,-56.1016504503
COV09	0	0	0	290	https://maps.google.com/?q=-25.4104582482,-56.1548433596
COV09	0	0	0	280	https://maps.google.com/?q=-25.3998541582,-56.153642752
COV09	0	0	0	279	https://maps.google.com/?q=-25.3993393641,-56.1535902612
COV09	0	0	0	279	https://maps.google.com/?q=-25.3992554765,-56.1541565216
COV09	0	0	0	265	https://maps.google.com/?q=-25.3866600092,-56.1613741531
COV09	0	0	0	260	https://maps.google.com/?q=-25.3799319324,-56.162408101
COV09	0	0	0	258	https://maps.google.com/?q=-25.3770720238,-56.1632893222
COV09	0	0	0	257	https://maps.google.com/?q=-25.3771549603,-56.163568821
COV09	0	0	0	257	https://maps.google.com/?q=-25.3759081629,-56.1636789092
COV09	0	0	0	256	https://maps.google.com/?q=-25.3756443751,-56.1625946271
COV09	0	0	0	276	https://maps.google.com/?q=-25.3984722903,-56.1505590542
COV09	0	0	0	273	https://maps.google.com/?q=-25.3971190994,-56.1458525107
COV09	0	0	0	272	https://maps.google.com/?q=-25.3968794039,-56.1459337468
COV09	0	0	0	272	https://maps.google.com/?q=-25.3968589931,-56.1449479049
COV09	0	0	0	267	https://maps.google.com/?q=-25.3952225513,-56.1392571642
COV09	0	0	0	266	https://maps.google.com/?q=-25.3947050102,-56.1374576005
COV09	0	0	0	257	https://maps.google.com/?q=-25.4046254028,-56.1325103445
COV09	0	0	0	264	https://maps.google.com/?q=-25.3948516323,-56.1348620259
COV09	0	0	0	257	https://maps.google.com/?q=-25.3939106521,-56.1250203188
COV09	0	0	0	254	https://maps.google.com/?q=-25.3914091868,-56.1245068345
COV09	0	0	0	262	https://maps.google.com/?q=-25.3921962972,-56.135819381
COV09	0	0	0	262	https://maps.google.com/?q=-25.3921871151,-56.1357279671
COV09	0	0	0	260	https://maps.google.com/?q=-25.3904662,-56.1364431256
COV09	0	0	0	260	https://maps.google.com/?q=-25.3901596007,-56.1356742297
COV09	0	0	0	257	https://maps.google.com/?q=-25.3861972455,-56.1379821091
COV09	0	0	0	256	https://maps.google.com/?q=-25.3856703718,-56.1381720419
COV09	0	0	0	246	https://maps.google.com/?q=-25.3784583226,-56.127793835
COV09	0	0	0	245	https://maps.google.com/?q=-25.3769213792,-56.1278335851
COV09	0	0	0	244	https://maps.google.com/?q=-25.3768635154,-56.1281477515
COV09	0	0	0	239	https://maps.google.com/?q=-25.3734459945,-56.1219122966
COV09	0	0	0	239	https://maps.google.com/?q=-25.3737614703,-56.121817778
COV09	0	0	0	237	https://maps.google.com/?q=-25.3764468517,-56.1209076736
COV09	0	0	0	231	https://maps.google.com/?q=-25.3862186056,-56.1175376963
COV09	0	0	0	233	https://maps.google.com/?q=-25.3738743621,-56.1146474622
COV09	0	0	0	230	https://maps.google.com/?q=-25.3762594576,-56.1104035883
COV09	0	0	0	239	https://maps.google.com/?q=-25.3726972971,-56.122169113
COV09	0	0	0	239	https://maps.google.com/?q=-25.3727842393,-56.1224961423
COV09	0	0	0	235	https://maps.google.com/?q=-25.3664981221,-56.1242954163
COV09	0	0	0	251	https://maps.google.com/?q=-25.3795473581,-56.1404606789
COV09	0	0	0	250	https://maps.google.com/?q=-25.3773685906,-56.1412382353
COV09	0	0	0	246	https://maps.google.com/?q=-25.3793716668,-56.1470716667
COV09	0	0	0	247	https://maps.google.com/?q=-25.3744940161,-56.1422640633
COV09	0	0	0	246	https://maps.google.com/?q=-25.373523604,-56.1436440668
COV09	0	0	0	245	https://maps.google.com/?q=-25.3721233334,-56.14174
COV09	0	0	0	305	https://maps.google.com/?q=-25.4003044189,-56.1759351591
COV09	0	0	0	295	https://maps.google.com/?q=-25.3912673209,-56.1787949134
COV09	0	0	0	285	https://maps.google.com/?q=-25.3808386354,-56.1820944473

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV09	0	0	0	284	https://maps.google.com/?q=-25.3796373358,-56.1824744867
COV09	0	0	0	283	https://maps.google.com/?q=-25.3797180138,-56.1829621724
COV09	0	0	0	282	https://maps.google.com/?q=-25.3780116011,-56.1829887858
COV09	0	0	0	281	https://maps.google.com/?q=-25.3779300002,-56.1821233332
COV09	0	0	0	268	https://maps.google.com/?q=-25.3630147357,-56.1882584642
COV09	0	0	0	257	https://maps.google.com/?q=-25.358210703,-56.1988940071
COV09	0	0	0	358	https://maps.google.com/?q=-25.4266382726,-56.1896702665
COV09	0	0	0	340	https://maps.google.com/?q=-25.4140841282,-56.1932654152
COV09	0	0	0	360	https://maps.google.com/?q=-25.4280172007,-56.1892660495
COV09	0	0	0	360	https://maps.google.com/?q=-25.4281484818,-56.1893121905
COV09	0	0	0	360	https://maps.google.com/?q=-25.4283294256,-56.1891694672
COV09	0	0	0	347	https://maps.google.com/?q=-25.4372377256,-56.186415989
COV09	0	0	0	346	https://maps.google.com/?q=-25.43778881,-56.1866179416
COV09	0	0	0	338	https://maps.google.com/?q=-25.4429364367,-56.1901469336
COV09	0	0	0	338	https://maps.google.com/?q=-25.4429002982,-56.1901961329
COV09	0	0	0	338	https://maps.google.com/?q=-25.4357384305,-56.1795093348
COV09	0	0	0	338	https://maps.google.com/?q=-25.4356235053,-56.1795386947
COV09	0	0	0	333	https://maps.google.com/?q=-25.4346884558,-56.1757316229
COV09	546	554	473	389	https://maps.google.com/?q=-25.4324282368,-56.2083872954
COV09	0	0	0	377	https://maps.google.com/?q=-25.4395479414,-56.2087911452
COV09	0	0	0	366	https://maps.google.com/?q=-25.4466888782,-56.2091962353
COV09	0	0	0	365	https://maps.google.com/?q=-25.4466852717,-56.2095893639
COV09	0	0	0	351	https://maps.google.com/?q=-25.4497763969,-56.2036680945
COV09	0	0	0	341	https://maps.google.com/?q=-25.4564946894,-56.202162775
COV09	556	563	481	395	https://maps.google.com/?q=-25.4255883334,-56.2049016667
COV09	553	561	479	394	https://maps.google.com/?q=-25.4256783334,-56.20406
COV09	581	588	504	410	https://maps.google.com/?q=-25.4209540753,-56.2179373181
COV09	581	588	503	410	https://maps.google.com/?q=-25.4209005513,-56.2179309546
COV09	563	570	487	399	https://maps.google.com/?q=-25.4151047561,-56.2172419202
COV09	561	568	486	398	https://maps.google.com/?q=-25.4143826811,-56.2171560802
COV09	0	0	0	397	https://maps.google.com/?q=-25.4136085107,-56.2169569164
COV09	0	0	0	396	https://maps.google.com/?q=-25.4136359782,-56.217468761
COV09	553	561	479	394	https://maps.google.com/?q=-25.4137979889,-56.2144458231
COV09	532	541	461	381	https://maps.google.com/?q=-25.4073905327,-56.2155127074
COV09	517	526	447	371	https://maps.google.com/?q=-25.4017532017,-56.2173188006
COV09	497	507	431	360	https://maps.google.com/?q=-25.3943492967,-56.2196905902
COV09	484	494	419	351	https://maps.google.com/?q=-25.3888132211,-56.2214440013
COV09	482	492	418	350	https://maps.google.com/?q=-25.3880992777,-56.2216687194
COV09	480	490	416	349	https://maps.google.com/?q=-25.3884051519,-56.2224327859
COV09	469	479	407	342	https://maps.google.com/?q=-25.3896031806,-56.2278352777
COV09	462	473	401	338	https://maps.google.com/?q=-25.3903783919,-56.2313460526
COV09	0	0	0	339	https://maps.google.com/?q=-25.3874719215,-56.2287698624
COV09	0	0	0	337	https://maps.google.com/?q=-25.3869250001,-56.2267616667
COV09	0	0	0	316	https://maps.google.com/?q=-25.3711865962,-56.2272534524
COV09	481	491	416	349	https://maps.google.com/?q=-25.3880960838,-56.2209967152
COV09	454	464	393	332	https://maps.google.com/?q=-25.3798894103,-56.2129630069
COV09	452	463	392	331	https://maps.google.com/?q=-25.3792161977,-56.2130937339
COV09	452	462	391	331	https://maps.google.com/?q=-25.3791245065,-56.2128647961

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV09	418	429	362	310	https://maps.google.com/?q=-25.3616418118,-56.2113214423
COV09	413	424	357	306	https://maps.google.com/?q=-25.3583641409,-56.210527497
COV09	0	0	0	293	https://maps.google.com/?q=-25.3462742921,-56.214509405
COV09	0	0	0	283	https://maps.google.com/?q=-25.3361879977,-56.2177621272
COV09	0	0	0	280	https://maps.google.com/?q=-25.3337827784,-56.2185376972
COV09	0	0	0	271	https://maps.google.com/?q=-25.335196377,-56.2285965121
COV09	0	0	0	260	https://maps.google.com/?q=-25.3270814001,-56.2362611195
COV09	0	0	0	275	https://maps.google.com/?q=-25.327901685,-56.2204785367
COV09	0	0	0	293	https://maps.google.com/?q=-25.3698680568,-56.206640884
COV09	0	0	0	284	https://maps.google.com/?q=-25.3787459977,-56.2029824886
COV09	0	0	0	280	https://maps.google.com/?q=-25.3832238108,-56.2023092965
COV09	0	0	0	279	https://maps.google.com/?q=-25.3830279268,-56.201851968
COV09	0	0	0	274	https://maps.google.com/?q=-25.3897670963,-56.2001084753
COV09	0	0	0	262	https://maps.google.com/?q=-25.4033553282,-56.196046575
COV09	413	423	357	306	https://maps.google.com/?q=-25.3582777233,-56.2104585169
COV09	398	409	345	296	https://maps.google.com/?q=-25.3524776699,-56.2026935469
COV09	376	388	326	282	https://maps.google.com/?q=-25.342554823,-56.190909796
COV09	0	0	0	281	https://maps.google.com/?q=-25.342220808,-56.1897220997
COV09	0	0	0	281	https://maps.google.com/?q=-25.3422955008,-56.1897106979
COV09	0	0	0	281	https://maps.google.com/?q=-25.3421333334,-56.1893666667
COV09	0	0	0	279	https://maps.google.com/?q=-25.3434500002,-56.1890699999
COV09	0	0	0	280	https://maps.google.com/?q=-25.3420300001,-56.18901
COV09	0	0	0	280	https://maps.google.com/?q=-25.3426533345,-56.1886750001
COV09	373	384	323	279	https://maps.google.com/?q=-25.3398352129,-56.191763223
COV09	369	380	320	277	https://maps.google.com/?q=-25.3373869334,-56.1925314691
COV09	0	0	0	264	https://maps.google.com/?q=-25.3321355879,-56.1769413438
COV09	0	0	0	256	https://maps.google.com/?q=-25.3418609245,-56.1739180945
COV09	0	0	0	252	https://maps.google.com/?q=-25.3475245988,-56.1721552032
COV09	0	0	0	246	https://maps.google.com/?q=-25.3454099895,-56.1637256017
COV09	0	0	0	246	https://maps.google.com/?q=-25.3452511994,-56.16370889
COV09	0	0	0	248	https://maps.google.com/?q=-25.3518792068,-56.1707996527
COV09	0	0	0	241	https://maps.google.com/?q=-25.3615478969,-56.1677327906
COV09	0	0	0	251	https://maps.google.com/?q=-25.3223530123,-56.1692509738
COV09	0	0	0	242	https://maps.google.com/?q=-25.316539651,-56.1608940091
COV09	0	0	0	226	https://maps.google.com/?q=-25.2939152718,-56.1680076956
COV09	368	379	318	276	https://maps.google.com/?q=-25.3361903403,-56.1929360766
COV09	364	375	315	274	https://maps.google.com/?q=-25.3369933334,-56.1958916667
COV09	367	378	318	276	https://maps.google.com/?q=-25.335891887,-56.1930369921
COV09	0	0	0	272	https://maps.google.com/?q=-25.332105716,-56.1944110073
COV09	0	0	0	266	https://maps.google.com/?q=-25.3289387277,-56.1990177858
COV09	0	0	0	258	https://maps.google.com/?q=-25.3195326551,-56.2019896458
COV09	0	0	0	253	https://maps.google.com/?q=-25.313631922,-56.2038532284
COV09	0	0	0	246	https://maps.google.com/?q=-25.3095618414,-56.1947940208
COV09	0	0	0	244	https://maps.google.com/?q=-25.3066627817,-56.1959523691
COV09	0	0	0	236	https://maps.google.com/?q=-25.2954625834,-56.1996481092
COV09	0	0	0	235	https://maps.google.com/?q=-25.2954050001,-56.2011166666
COV09	0	0	0	234	https://maps.google.com/?q=-25.2931889732,-56.2004378858
COV09	0	0	0	234	https://maps.google.com/?q=-25.2923916667,-56.2007483333

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV09	0	0	0	234	https://maps.google.com/?q=-25.2924116677,-56.2008266665
COV09	0	0	0	234	https://maps.google.com/?q=-25.2922706968,-56.2007772241
COV09	0	0	0	232	https://maps.google.com/?q=-25.2924166669,-56.2027049999
COV09	0	0	0	237	https://maps.google.com/?q=-25.3035536468,-56.1856020725
COV09	0	0	0	236	https://maps.google.com/?q=-25.3041877796,-56.1853415985
COV09	0	0	0	236	https://maps.google.com/?q=-25.3041798292,-56.1853137762
COV09	0	0	0	234	https://maps.google.com/?q=-25.3080607322,-56.1841445115
COV09	0	0	0	234	https://maps.google.com/?q=-25.3079913104,-56.1837458496
COV09	0	0	0	231	https://maps.google.com/?q=-25.3114252551,-56.18317515
COV09	0	0	0	231	https://maps.google.com/?q=-25.3121716668,-56.1828066667
COV09	0	0	0	231	https://maps.google.com/?q=-25.2950470073,-56.1877894562
COV09	0	0	0	210	https://maps.google.com/?q=-25.2589300009,-56.1831849993
COV09	0	0	0	202	https://maps.google.com/?q=-25.2454216681,-56.1746349994
COV09	0	0	0	192	https://maps.google.com/?q=-25.2459283335,-56.150515
COV09	0	0	0	185	https://maps.google.com/?q=-25.2400000045,-56.134066667
COV09	0	0	0	246	https://maps.google.com/?q=-25.3043456351,-56.2067918346
COV09	0	0	0	346	https://maps.google.com/?q=-25.3850321687,-56.2226507039
COV09	813	807	704	537	https://maps.google.com/?q=-25.4730261183,-56.2240052792
COV09	873	867	756	580	https://maps.google.com/?q=-25.4707083334,-56.2482033333
COV09	0	0	0	560	https://maps.google.com/?q=-25.4652023133,-56.2478392691
COV09	0	0	0	542	https://maps.google.com/?q=-25.4600278466,-56.2474495865
COV09	0	0	0	542	https://maps.google.com/?q=-25.4600290584,-56.24765148
COV09	0	0	0	531	https://maps.google.com/?q=-25.4563932215,-56.2471845586
COV09	0	0	0	526	https://maps.google.com/?q=-25.4562689783,-56.2488420563
COV09	0	0	0	521	https://maps.google.com/?q=-25.4567030288,-56.2439141233
COV09	0	0	0	509	https://maps.google.com/?q=-25.4571285564,-56.2393443796
COV09	0	0	0	500	https://maps.google.com/?q=-25.4472419692,-56.2477701756
COV09	0	0	0	455	https://maps.google.com/?q=-25.4301281056,-56.2456658328
COV09	862	857	747	574	https://maps.google.com/?q=-25.4708353942,-56.2464789198
COV09	933	927	808	622	https://maps.google.com/?q=-25.468880183,-56.2683382596
COV09	913	909	791	612	https://maps.google.com/?q=-25.4664243565,-56.268151736
COV09	897	893	777	603	https://maps.google.com/?q=-25.4642861557,-56.2679893417
COV09	869	867	753	588	https://maps.google.com/?q=-25.4605016224,-56.2676546758
COV09	896	892	776	602	https://maps.google.com/?q=-25.4642903113,-56.2678061788
COV09	1106	1092	958	725	https://maps.google.com/?q=-25.4729583334,-56.2885233333
COV09	1119	1105	969	733	https://maps.google.com/?q=-25.4704406025,-56.2888642943
COV09	1104	1091	956	725	https://maps.google.com/?q=-25.4691009595,-56.2886771469
COV09	1076	1065	932	711	https://maps.google.com/?q=-25.4665976124,-56.2884879665
COV09	1074	1064	930	710	https://maps.google.com/?q=-25.4665876143,-56.2886787078
COV09	1070	1059	926	708	https://maps.google.com/?q=-25.4659964672,-56.2884461133
COV09	1039	1031	900	692	https://maps.google.com/?q=-25.4630353396,-56.2881895636
COV09	0	0	0	691	https://maps.google.com/?q=-25.4631531887,-56.2879708373
COV09	1032	1024	894	688	https://maps.google.com/?q=-25.4623308149,-56.2881360863
COV09	1031	1023	893	688	https://maps.google.com/?q=-25.4623229539,-56.2882757774
COV09	1002	997	868	672	https://maps.google.com/?q=-25.4592499413,-56.2878879999
COV09	999	994	865	671	https://maps.google.com/?q=-25.4592714041,-56.2875793123
COV09	990	985	857	666	https://maps.google.com/?q=-25.4579141451,-56.2877722069
COV09	983	979	851	662	https://maps.google.com/?q=-25.4571686843,-56.2877570667

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV09	965	962	835	652	https://maps.google.com/?q=-25.4571316668,-56.2899783333
COV09	0	0	0	637	https://maps.google.com/?q=-25.4519065272,-56.2873845822
COV09	0	0	0	603	https://maps.google.com/?q=-25.4529860452,-56.2788249907
COV09	0	0	0	617	https://maps.google.com/?q=-25.4513760497,-56.2923301717
COV09	0	0	0	612	https://maps.google.com/?q=-25.4512268875,-56.2938205128
COV09	0	0	0	611	https://maps.google.com/?q=-25.4510247242,-56.2937986356
COV09	0	0	0	608	https://maps.google.com/?q=-25.4510590272,-56.294542634
COV09	0	0	0	605	https://maps.google.com/?q=-25.4510099272,-56.295354833
COV09	0	0	0	594	https://maps.google.com/?q=-25.4491616669,-56.2949700001
COV09	0	0	0	597	https://maps.google.com/?q=-25.4500000001,-56.2966383333
COV09	0	0	0	604	https://maps.google.com/?q=-25.4501059806,-56.2945455108
COV09	0	0	0	596	https://maps.google.com/?q=-25.4423258582,-56.2867331981
COV09	0	0	0	596	https://maps.google.com/?q=-25.4423332174,-56.2865085699
COV09	0	0	0	594	https://maps.google.com/?q=-25.4416868103,-56.2866897526
COV09	0	0	0	585	https://maps.google.com/?q=-25.4417683338,-56.2842749999
COV09	0	0	0	592	https://maps.google.com/?q=-25.4413012081,-56.2866635377
COV09	0	0	0	592	https://maps.google.com/?q=-25.4413008764,-56.2867551286
COV09	0	0	0	584	https://maps.google.com/?q=-25.4391108182,-56.2865161191
COV09	0	0	0	578	https://maps.google.com/?q=-25.4376626295,-56.2864161784
COV09	0	0	0	570	https://maps.google.com/?q=-25.4380539494,-56.2841646355
COV09	0	0	0	531	https://maps.google.com/?q=-25.4377138253,-56.2732837924
COV09	0	0	0	514	https://maps.google.com/?q=-25.4383666243,-56.2671200015
COV09	0	0	0	494	https://maps.google.com/?q=-25.4390782832,-56.2598338622
COV09	0	0	0	479	https://maps.google.com/?q=-25.433319667,-56.2591023363
COV09	0	0	0	529	https://maps.google.com/?q=-25.4368657173,-56.2731991389
COV09	0	0	0	516	https://maps.google.com/?q=-25.4329924791,-56.2728848559
COV09	0	0	0	506	https://maps.google.com/?q=-25.4315150532,-56.276270493
COV09	0	0	0	504	https://maps.google.com/?q=-25.4310641373,-56.276550211
COV09	0	0	0	455	https://maps.google.com/?q=-25.4132242558,-56.2762994513
COV09	0	0	0	455	https://maps.google.com/?q=-25.4132010738,-56.2761916732
COV09	0	0	0	455	https://maps.google.com/?q=-25.413215176,-56.2763022752
COV09	0	0	0	423	https://maps.google.com/?q=-25.3994956799,-56.2805319484
COV09	0	0	0	400	https://maps.google.com/?q=-25.3880992044,-56.2840666874
COV09	0	0	0	372	https://maps.google.com/?q=-25.3724969387,-56.289042696
COV09	0	0	0	547	https://maps.google.com/?q=-25.4288503298,-56.2858595811
COV09	1220	1202	1056	797	https://maps.google.com/?q=-25.4713542604,-56.302963724
COV09	1261	1242	1092	822	https://maps.google.com/?q=-25.4730285138,-56.306571253
COV09	1384	1360	1199	900	https://maps.google.com/?q=-25.4727590722,-56.32064677
COV09	0	0	0	884	https://maps.google.com/?q=-25.4680751091,-56.3240004598
COV09	2897	2782	2509	1829	https://maps.google.com/?q=-25.4715853082,-56.3967893552
COV09	2833	2726	2454	1797	https://maps.google.com/?q=-25.4706538476,-56.3967940012
COV09	2624	2543	2272	1693	https://maps.google.com/?q=-25.4687950132,-56.3951853823
COV09	2787	2686	2414	1775	https://maps.google.com/?q=-25.4707924839,-56.3960492288
COV09	2771	2672	2400	1767	https://maps.google.com/?q=-25.4708211056,-56.3957749083
COV09	2856	2750	2473	1817	https://maps.google.com/?q=-25.4697801308,-56.3986636084
COV09	2811	2711	2434	1795	https://maps.google.com/?q=-25.4691183028,-56.3986570763
COV09	2769	2674	2398	1774	https://maps.google.com/?q=-25.4691366351,-56.3979525687
COV09	5281	4886	4573	3316	https://maps.google.com/?q=-25.4695617268,-56.4316985192

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV09	5856	5516	5071	4245	https://maps.google.com/?q=-25.4798685302,-56.4360313925
COV09	5662	5356	4903	4100	https://maps.google.com/?q=-25.4803461913,-56.4352132387
COV09	5036	4829	4361	3652	https://maps.google.com/?q=-25.4831180185,-56.4339573563
COV09	4604	4455	3987	3353	https://maps.google.com/?q=-25.4854209981,-56.4332225155
COV09	0	0	0	4908	https://maps.google.com/?q=-25.4783113166,-56.4399926857
COV09	8098	8594	7013	8699	https://maps.google.com/?q=-25.4697950001,-56.4473566667
COV09	7747	8031	6709	8039	https://maps.google.com/?q=-25.4701678985,-56.446462923
COV09	7890	8256	6833	8299	https://maps.google.com/?q=-25.4693854041,-56.4478937808
COV09	8474	9335	7339	9603	https://maps.google.com/?q=-25.4703537639,-56.4483280969
COV09	8555	9607	7409	9909	https://maps.google.com/?q=-25.4714195799,-56.4491221688
COV10	9084	12880	7867	12566	https://maps.google.com/?q=-25.4721168131,-56.4480329233
COV10	9058	12609	7845	12410	https://maps.google.com/?q=-25.4721174756,-56.4482090978
COV10	8853	11024	7667	11264	https://maps.google.com/?q=-25.4720444958,-56.4495275278
COV10	8508	9463	7368	9752	https://maps.google.com/?q=-25.4707534564,-56.4514128417
COV10	8361	8989	7240	9201	https://maps.google.com/?q=-25.4702080848,-56.4522740057
COV10	0	0	0	0	https://maps.google.com/?q=-25.4694012899,-56.4515883842
COV10	7000	6582	6062	5691	https://maps.google.com/?q=-25.4662800017,-56.4574988775
COV10	5624	5203	4871	3680	https://maps.google.com/?q=-25.4678472042,-56.4734931182
COV10	5550	5133	4807	3596	https://maps.google.com/?q=-25.4680051259,-56.474546478
COV10	0	0	0	0	https://maps.google.com/?q=-25.4680299801,-56.4745523386
COV10	5322	4918	4609	3346	https://maps.google.com/?q=-25.4652747932,-56.4742866757
COV10	4847	4476	4198	2876	https://maps.google.com/?q=-25.4579715977,-56.4727390602
COV10	0	0	0	2836	https://maps.google.com/?q=-25.4580034275,-56.4722232809
COV10	0	0	0	2754	https://maps.google.com/?q=-25.4572406237,-56.4744091149
COV10	0	0	0	2712	https://maps.google.com/?q=-25.4569800622,-56.4750043623
COV10	0	0	0	2668	https://maps.google.com/?q=-25.4561412687,-56.4737516436
COV10	0	0	0	2607	https://maps.google.com/?q=-25.4565515677,-56.4728601312
COV10	0	0	0	2583	https://maps.google.com/?q=-25.4555302998,-56.4749934441
COV10	4764	4398	4125	2799	https://maps.google.com/?q=-25.4565801015,-56.47228141
COV10	4572	4221	3960	2628	https://maps.google.com/?q=-25.4533721173,-56.4706833866
COV10	3978	3673	3445	2147	https://maps.google.com/?q=-25.4417349102,-56.4644941035
COV10	3907	3607	3383	2094	https://maps.google.com/?q=-25.4401028102,-56.4636379697
COV10	3697	3414	3201	1941	https://maps.google.com/?q=-25.4349423712,-56.460929464
COV10	3694	3411	3199	1940	https://maps.google.com/?q=-25.4349606391,-56.4608875148
COV10	3691	3408	3196	1938	https://maps.google.com/?q=-25.435007481,-56.4609052071
COV10	3590	3327	3109	1902	https://maps.google.com/?q=-25.4354665241,-56.4598492285
COV10	3085	2911	2671	1717	https://maps.google.com/?q=-25.4380237439,-56.4539444265
COV10	3066	2895	2655	1709	https://maps.google.com/?q=-25.4381309706,-56.4536968148
COV10	0	0	0	1689	https://maps.google.com/?q=-25.4387700788,-56.4540892732
COV10	0	0	0	1654	https://maps.google.com/?q=-25.4398115071,-56.4548374822
COV10	0	0	0	1613	https://maps.google.com/?q=-25.4391183351,-56.4563633336
COV10	0	0	0	1648	https://maps.google.com/?q=-25.4399685801,-56.4550006117
COV10	0	0	0	1578	https://maps.google.com/?q=-25.4407553727,-56.4569974836
COV10	0	0	0	1567	https://maps.google.com/?q=-25.4405853824,-56.457445279
COV10	0	0	0	1540	https://maps.google.com/?q=-25.4400466668,-56.458475
COV10	3013	2851	2609	1689	https://maps.google.com/?q=-25.4379010188,-56.4532377644
COV10	2992	2833	2591	1682	https://maps.google.com/?q=-25.4380884896,-56.4530073087
COV10	0	0	0	1664	https://maps.google.com/?q=-25.4376016668,-56.452595

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV10	2982	2825	2582	1678	https://maps.google.com/?q=-25.4381827735,-56.4528914061
COV10	2922	2774	2530	1654	https://maps.google.com/?q=-25.4387217767,-56.4521895218
COV10	2785	2657	2412	1601	https://maps.google.com/?q=-25.4395462943,-56.450162574
COV10	2696	2580	2335	1565	https://maps.google.com/?q=-25.4403930635,-56.4489408504
COV10	2666	2554	2309	1553	https://maps.google.com/?q=-25.4407000629,-56.4485154193
COV10	2652	2542	2297	1547	https://maps.google.com/?q=-25.4408436095,-56.4483164951
COV10	2538	2442	2198	1500	https://maps.google.com/?q=-25.442074162,-56.4466199181
COV10	2526	2432	2188	1496	https://maps.google.com/?q=-25.4419154035,-56.4464685465
COV10	2508	2416	2172	1488	https://maps.google.com/?q=-25.4416660428,-56.4462307895
COV10	2502	2411	2167	1486	https://maps.google.com/?q=-25.4417455142,-56.4461525939
COV10	2504	2413	2169	1486	https://maps.google.com/?q=-25.4416145054,-56.4461816505
COV10	2490	2401	2157	1481	https://maps.google.com/?q=-25.4413897438,-56.4460635882
COV10	2499	2408	2164	1484	https://maps.google.com/?q=-25.4426149234,-56.4471189215
COV10	2440	2357	2113	1459	https://maps.google.com/?q=-25.4434369334,-56.4479212407
COV10	2525	2431	2186	1495	https://maps.google.com/?q=-25.4421035281,-56.4503381508
COV10	2855	2717	2473	1629	https://maps.google.com/?q=-25.4395233334,-56.4527716667
COV10	3683	3402	3190	1935	https://maps.google.com/?q=-25.4349582929,-56.4610226744
COV10	0	0	0	1868	https://maps.google.com/?q=-25.4367407423,-56.4619698749
COV10	0	0	0	1845	https://maps.google.com/?q=-25.4370366668,-56.4612316667
COV10	0	0	0	1848	https://maps.google.com/?q=-25.4373105516,-56.4622703087
COV10	0	0	0	1785	https://maps.google.com/?q=-25.4364900001,-56.4642816667
COV10	0	0	0	1837	https://maps.google.com/?q=-25.4376125261,-56.4624295269
COV10	0	0	0	1815	https://maps.google.com/?q=-25.4382333708,-56.4627568745
COV10	0	0	0	1753	https://maps.google.com/?q=-25.4400547829,-56.4637246643
COV10	0	0	0	1652	https://maps.google.com/?q=-25.4386116668,-56.46731
COV10	0	0	0	1721	https://maps.google.com/?q=-25.4410351603,-56.4642455916
COV10	0	0	0	1717	https://maps.google.com/?q=-25.4409500001,-56.4643766667
COV10	0	0	0	1717	https://maps.google.com/?q=-25.4411724018,-56.4643185161
COV10	0	0	0	1696	https://maps.google.com/?q=-25.4418239054,-56.464659893
COV10	0	0	0	1668	https://maps.google.com/?q=-25.4427547355,-56.465135883
COV10	0	0	0	1579	https://maps.google.com/?q=-25.4457848181,-56.4667354314
COV10	0	0	0	1567	https://maps.google.com/?q=-25.4462135056,-56.466963674
COV10	0	0	0	1398	https://maps.google.com/?q=-25.450065366,-56.4715556986
COV10	0	0	0	1304	https://maps.google.com/?q=-25.4480513715,-56.4764228776
COV10	0	0	0	1274	https://maps.google.com/?q=-25.4465176364,-56.47566976
COV10	0	0	0	1256	https://maps.google.com/?q=-25.4469137548,-56.4791718156
COV10	0	0	0	1249	https://maps.google.com/?q=-25.4465205191,-56.4789694349
COV10	0	0	0	1572	https://maps.google.com/?q=-25.4456329763,-56.466467569
COV10	0	0	0	1644	https://maps.google.com/?q=-25.4432357713,-56.4643688171
COV10	0	0	0	1642	https://maps.google.com/?q=-25.4431682292,-56.4643164019
COV10	0	0	0	1642	https://maps.google.com/?q=-25.4432933334,-56.4642766667
COV10	0	0	0	1634	https://maps.google.com/?q=-25.4434386916,-56.4639924303
COV10	0	0	0	1808	https://maps.google.com/?q=-25.4383159748,-56.4625673911
COV10	0	0	0	1788	https://maps.google.com/?q=-25.4385275217,-56.4620821254
COV10	0	0	0	1712	https://maps.google.com/?q=-25.4393422812,-56.4602126847
COV10	3064	2893	2653	1708	https://maps.google.com/?q=-25.4320123899,-56.4682604238
COV10	0	0	0	1612	https://maps.google.com/?q=-25.4288642101,-56.4665366927
COV10	2990	2831	2590	1680	https://maps.google.com/?q=-25.4329029513,-56.4687302068

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV10	2686	2571	2326	1561	https://maps.google.com/?q=-25.4369956545,-56.4708892599
COV10	2645	2536	2291	1544	https://maps.google.com/?q=-25.437599052,-56.4712075881
COV10	2634	2526	2281	1540	https://maps.google.com/?q=-25.4376916668,-56.4710316667
COV10	0	0	0	1533	https://maps.google.com/?q=-25.4380193612,-56.4713890215
COV10	0	0	0	1434	https://maps.google.com/?q=-25.4405775238,-56.469162575
COV10	0	0	0	1529	https://maps.google.com/?q=-25.4380583334,-56.4711866667
COV10	0	0	0	1692	https://maps.google.com/?q=-25.4317840493,-56.4688171231
COV10	0	0	0	1642	https://maps.google.com/?q=-25.4310217838,-56.4706492009
COV10	0	0	0	1637	https://maps.google.com/?q=-25.4308500001,-56.4705483333
COV10	0	0	0	1519	https://maps.google.com/?q=-25.4289909695,-56.475529755
COV10	0	0	0	1365	https://maps.google.com/?q=-25.426053855,-56.4826664262
COV10	0	0	0	1362	https://maps.google.com/?q=-25.4259919727,-56.4828101569
COV10	0	0	0	1233	https://maps.google.com/?q=-25.4228485893,-56.4898813359
COV10	0	0	0	1121	https://maps.google.com/?q=-25.4196770135,-56.4972693692
COV10	0	0	0	1117	https://maps.google.com/?q=-25.4199236861,-56.4972082584
COV10	0	0	0	963	https://maps.google.com/?q=-25.4305238709,-56.5040598793
COV10	0	0	0	952	https://maps.google.com/?q=-25.4312168833,-56.5050366619
COV10	0	0	0	924	https://maps.google.com/?q=-25.4333717303,-56.5070333384
COV10	0	0	0	891	https://maps.google.com/?q=-25.4350100001,-56.5035533333
COV10	0	0	0	896	https://maps.google.com/?q=-25.435595399,-56.5092073995
COV10	0	0	0	809	https://maps.google.com/?q=-25.4395867147,-56.4985490825
COV10	0	0	0	773	https://maps.google.com/?q=-25.4386783334,-56.4931516667
COV10	0	0	0	784	https://maps.google.com/?q=-25.4427782297,-56.5000980435
COV10	0	0	0	890	https://maps.google.com/?q=-25.4353726615,-56.5099213598
COV10	0	0	0	942	https://maps.google.com/?q=-25.4298415395,-56.5060215359
COV10	0	0	0	893	https://maps.google.com/?q=-25.4263787905,-56.5091863391
COV10	0	0	0	819	https://maps.google.com/?q=-25.4253091336,-56.5186154641
COV10	0	0	0	760	https://maps.google.com/?q=-25.4306420532,-56.5255984013
COV10	0	0	0	725	https://maps.google.com/?q=-25.4288676589,-56.531044512
COV10	0	0	0	723	https://maps.google.com/?q=-25.4290055665,-56.5314355526
COV10	0	0	0	801	https://maps.google.com/?q=-25.4228573623,-56.518492335
COV10	0	0	0	880	https://maps.google.com/?q=-25.4250298178,-56.5086643577
COV10	0	0	0	1037	https://maps.google.com/?q=-25.4137420181,-56.4942304971
COV10	0	0	0	944	https://maps.google.com/?q=-25.4092310983,-56.500109757
COV10	0	0	0	942	https://maps.google.com/?q=-25.4090716668,-56.500045
COV10	0	0	0	940	https://maps.google.com/?q=-25.4090455717,-56.500530769
COV10	0	0	0	918	https://maps.google.com/?q=-25.4110653438,-56.5014253649
COV10	0	0	0	873	https://maps.google.com/?q=-25.4155931072,-56.5037237652
COV10	0	0	0	872	https://maps.google.com/?q=-25.4156113642,-56.5036457898
COV10	0	0	0	861	https://maps.google.com/?q=-25.404859415,-56.5080104161
COV10	0	0	0	860	https://maps.google.com/?q=-25.4046908489,-56.5079890978
COV10	0	0	0	833	https://maps.google.com/?q=-25.4013961503,-56.5075724348
COV10	0	0	0	758	https://maps.google.com/?q=-25.3919575993,-56.511352125
COV10	0	0	0	695	https://maps.google.com/?q=-25.391803427,-56.5227920186
COV10	0	0	0	753	https://maps.google.com/?q=-25.391311218,-56.5116083858
COV10	0	0	0	688	https://maps.google.com/?q=-25.3810015375,-56.5154190747
COV10	0	0	0	670	https://maps.google.com/?q=-25.3808254904,-56.5192788494
COV10	0	0	0	645	https://maps.google.com/?q=-25.3728680038,-56.5183485491

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV10	0	0	0	806	https://maps.google.com/?q=-25.39888832,-56.5050168414
COV10	0	0	0	787	https://maps.google.com/?q=-25.4000759257,-56.5024124911
COV10	0	0	0	741	https://maps.google.com/?q=-25.3957212554,-56.496495157
COV10	0	0	0	727	https://maps.google.com/?q=-25.3934090188,-56.496773407
COV10	0	0	0	627	https://maps.google.com/?q=-25.3747849068,-56.4957811076
COV10	0	0	0	599	https://maps.google.com/?q=-25.3701990746,-56.4956285242
COV10	0	0	0	560	https://maps.google.com/?q=-25.3622360612,-56.4999459986
COV10	0	0	0	709	https://maps.google.com/?q=-25.3958481382,-56.491394547
COV10	0	0	0	1221	https://maps.google.com/?q=-25.4221578738,-56.4895692055
COV10	0	0	0	1122	https://maps.google.com/?q=-25.4161800001,-56.4864683333
COV10	0	0	0	1112	https://maps.google.com/?q=-25.4300983334,-56.4937116667
COV10	0	0	0	1333	https://maps.google.com/?q=-25.4246335679,-56.4821119679
COV10	0	0	0	1278	https://maps.google.com/?q=-25.4219081753,-56.4807112303
COV10	0	0	0	1137	https://maps.google.com/?q=-25.4247683334,-56.47503
COV10	0	0	0	1225	https://maps.google.com/?q=-25.4190572396,-56.4792460426
COV10	0	0	0	1222	https://maps.google.com/?q=-25.4191365332,-56.4790742662
COV10	0	0	0	1198	https://maps.google.com/?q=-25.4176299426,-56.47832169
COV10	0	0	0	1123	https://maps.google.com/?q=-25.412994241,-56.4759730861
COV10	0	0	0	1121	https://maps.google.com/?q=-25.4130418138,-56.4758836852
COV10	0	0	0	1113	https://maps.google.com/?q=-25.4123576386,-56.475650577
COV10	0	0	0	1106	https://maps.google.com/?q=-25.4118926296,-56.4754150011
COV10	0	0	0	1048	https://maps.google.com/?q=-25.4078244233,-56.4733071561
COV10	0	0	0	945	https://maps.google.com/?q=-25.3993505114,-56.468923157
COV10	0	0	0	867	https://maps.google.com/?q=-25.3948788479,-56.474555078
COV10	0	0	0	861	https://maps.google.com/?q=-25.394580959,-56.4752447657
COV10	0	0	0	1102	https://maps.google.com/?q=-25.4116438156,-56.4755952094
COV10	0	0	0	1045	https://maps.google.com/?q=-25.4102057881,-56.4801856982
COV10	0	0	0	1025	https://maps.google.com/?q=-25.4114532801,-56.4809309174
COV10	0	0	0	1021	https://maps.google.com/?q=-25.4115404569,-56.4805823441
COV10	0	0	0	993	https://maps.google.com/?q=-25.4104234058,-56.4838556182
COV10	0	0	0	990	https://maps.google.com/?q=-25.4103350007,-56.4841066666
COV10	0	0	0	1197	https://maps.google.com/?q=-25.4176421255,-56.4782676521
COV10	0	0	0	1364	https://maps.google.com/?q=-25.4260834208,-56.4826814335
COV10	0	0	0	1468	https://maps.google.com/?q=-25.4310018547,-56.4765108635
COV10	0	0	0	1346	https://maps.google.com/?q=-25.4363031395,-56.4792894201
COV10	0	0	0	1277	https://maps.google.com/?q=-25.4396992632,-56.4810091474
COV10	0	0	0	1260	https://maps.google.com/?q=-25.4406031292,-56.4814658998
COV10	0	0	0	1257	https://maps.google.com/?q=-25.440696669,-56.4813166671
COV10	3580	3320	3101	1898	https://maps.google.com/?q=-25.4339774812,-56.4605158351
COV10	3442	3207	2981	1848	https://maps.google.com/?q=-25.4346650001,-56.4590216667
COV10	3276	3071	2837	1787	https://maps.google.com/?q=-25.435475362,-56.4570982171
COV10	3143	2960	2722	1738	https://maps.google.com/?q=-25.4361683334,-56.4554533333
COV10	3497	3252	3029	1868	https://maps.google.com/?q=-25.4331594182,-56.4600939236
COV10	3427	3195	2967	1843	https://maps.google.com/?q=-25.4324469305,-56.4597172282
COV10	3423	3192	2965	1841	https://maps.google.com/?q=-25.4324300392,-56.4597549263
COV10	0	0	0	1779	https://maps.google.com/?q=-25.4328057479,-56.4579072363
COV10	0	0	0	1778	https://maps.google.com/?q=-25.4327812754,-56.4578795707
COV10	0	0	0	1777	https://maps.google.com/?q=-25.4328350031,-56.4578399996

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV10	0	0	0	1683	https://maps.google.com/?q=-25.4341666675,-56.4546266666
COV10	3434	3172	2974	1759	https://maps.google.com/?q=-25.4276394025,-56.4571097485
COV10	3425	3164	2966	1756	https://maps.google.com/?q=-25.4276768384,-56.4569970825
COV10	0	0	0	1679	https://maps.google.com/?q=-25.429533247,-56.4581621731
COV10	0	0	0	1643	https://maps.google.com/?q=-25.4304650001,-56.4585533333
COV10	0	0	0	1664	https://maps.google.com/?q=-25.4296934732,-56.4577611745
COV10	0	0	0	1639	https://maps.google.com/?q=-25.430102698,-56.4568225436
COV10	0	0	0	1633	https://maps.google.com/?q=-25.4298242113,-56.4566825066
COV10	0	0	0	1628	https://maps.google.com/?q=-25.4298266668,-56.45642
COV10	0	0	0	1623	https://maps.google.com/?q=-25.4294103602,-56.456474403
COV10	0	0	0	1621	https://maps.google.com/?q=-25.4294683334,-56.4563633333
COV10	3357	3109	2907	1733	https://maps.google.com/?q=-25.4269535419,-56.4565889859
COV10	3259	3030	2822	1700	https://maps.google.com/?q=-25.4258648235,-56.4560266304
COV10	3101	2901	2686	1646	https://maps.google.com/?q=-25.4267612549,-56.4540095971
COV10	3084	2886	2671	1640	https://maps.google.com/?q=-25.426864585,-56.4537782172
COV10	2943	2769	2549	1590	https://maps.google.com/?q=-25.4277291373,-56.4518422385
COV10	3033	2822	2627	1556	https://maps.google.com/?q=-25.4290519587,-56.4488798988
COV10	0	0	0	1620	https://maps.google.com/?q=-25.4275856484,-56.4541067093
COV10	0	0	0	1604	https://maps.google.com/?q=-25.4278533341,-56.4534733321
COV10	0	0	0	1612	https://maps.google.com/?q=-25.4278761097,-56.4542154256
COV10	0	0	0	1608	https://maps.google.com/?q=-25.4279983335,-56.4542783334
COV10	0	0	0	1656	https://maps.google.com/?q=-25.4243953129,-56.4552328085
COV10	0	0	0	1525	https://maps.google.com/?q=-25.4196215915,-56.4526540554
COV10	0	0	0	1521	https://maps.google.com/?q=-25.4195483352,-56.452818333
COV10	0	0	0	1451	https://maps.google.com/?q=-25.4165975074,-56.4510205684
COV10	0	0	0	1397	https://maps.google.com/?q=-25.4142643076,-56.4497740284
COV10	0	0	0	1349	https://maps.google.com/?q=-25.4120282573,-56.4485861132
COV10	0	0	0	1314	https://maps.google.com/?q=-25.4128916668,-56.4467483333
COV10	0	0	0	1343	https://maps.google.com/?q=-25.4117246478,-56.4484259373
COV10	0	0	0	1323	https://maps.google.com/?q=-25.4107882987,-56.4479319511
COV10	0	0	0	1284	https://maps.google.com/?q=-25.4087870485,-56.4468761872
COV10	0	0	0	1241	https://maps.google.com/?q=-25.4064687534,-56.4456532135
COV10	0	0	0	1231	https://maps.google.com/?q=-25.4059495739,-56.445379337
COV10	0	0	0	1218	https://maps.google.com/?q=-25.405206916,-56.4449875761
COV10	0	0	0	1209	https://maps.google.com/?q=-25.4046717424,-56.4447052689
COV10	0	0	0	1161	https://maps.google.com/?q=-25.4017902315,-56.4431853023
COV10	0	0	0	1119	https://maps.google.com/?q=-25.4030716668,-56.4402133333
COV10	0	0	0	1153	https://maps.google.com/?q=-25.4012848599,-56.4429187323
COV10	0	0	0	1068	https://maps.google.com/?q=-25.3955510908,-56.4399568661
COV10	0	0	0	909	https://maps.google.com/?q=-25.3816159475,-56.4353113212
COV10	3410	3150	2953	1746	https://maps.google.com/?q=-25.4279052106,-56.4565115029
COV10	3282	3033	2843	1661	https://maps.google.com/?q=-25.4296909947,-56.452104281
COV10	3208	2965	2778	1613	https://maps.google.com/?q=-25.4309097495,-56.4493984835
COV10	3105	2881	2689	1580	https://maps.google.com/?q=-25.4321374359,-56.4501232938
COV10	2872	2689	2487	1503	https://maps.google.com/?q=-25.4315316668,-56.453265
COV10	2725	2566	2360	1453	https://maps.google.com/?q=-25.4310133334,-56.4551416667
COV10	3138	2908	2717	1590	https://maps.google.com/?q=-25.4314779885,-56.4486003003
COV10	3127	2899	2708	1587	https://maps.google.com/?q=-25.4315961097,-56.4485050562

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV10	3044	2832	2636	1560	https://maps.google.com/?q=-25.4325419332,-56.4477837331
COV10	2939	2745	2545	1525	https://maps.google.com/?q=-25.4337571733,-56.4467710275
COV10	2724	2565	2359	1453	https://maps.google.com/?q=-25.4363214018,-56.444415536
COV10	2679	2528	2320	1438	https://maps.google.com/?q=-25.436882829,-56.444824186
COV10	2659	2511	2303	1431	https://maps.google.com/?q=-25.4355070091,-56.4436267895
COV10	2645	2499	2291	1426	https://maps.google.com/?q=-25.4353155875,-56.4434477353
COV10	2642	2497	2288	1425	https://maps.google.com/?q=-25.4352870596,-56.4434866231
COV10	2630	2486	2277	1421	https://maps.google.com/?q=-25.4351766668,-56.4440666667
COV10	0	0	0	0	https://maps.google.com/?q=-25.4365626053,-56.4442422917
COV10	3076	2857	2664	1570	https://maps.google.com/?q=-25.4293492519,-56.4483949943
COV10	3070	2853	2659	1568	https://maps.google.com/?q=-25.4292864891,-56.4483546682
COV10	0	0	0	1565	https://maps.google.com/?q=-25.4291478523,-56.4482728226
COV10	0	0	0	1484	https://maps.google.com/?q=-25.4260007372,-56.446304851
COV10	0	0	0	1422	https://maps.google.com/?q=-25.4233134123,-56.4447858223
COV10	0	0	0	1421	https://maps.google.com/?q=-25.4232893333,-56.4448285253
COV10	0	0	0	1400	https://maps.google.com/?q=-25.422329129,-56.4442208581
COV10	0	0	0	1382	https://maps.google.com/?q=-25.4214809732,-56.4437139432
COV10	0	0	0	1361	https://maps.google.com/?q=-25.4220866668,-56.4427
COV10	0	0	0	1360	https://maps.google.com/?q=-25.4220333334,-56.4426633333
COV10	0	0	0	1315	https://maps.google.com/?q=-25.4183085409,-56.4417785617
COV10	0	0	0	1254	https://maps.google.com/?q=-25.4151638498,-56.4398026022
COV10	0	0	0	1174	https://maps.google.com/?q=-25.4106631323,-56.4369155685
COV10	0	0	0	1111	https://maps.google.com/?q=-25.4067330204,-56.434416287
COV10	0	0	0	1099	https://maps.google.com/?q=-25.4059541593,-56.4339235694
COV10	0	0	0	1092	https://maps.google.com/?q=-25.4057083334,-56.4345016667
COV10	0	0	0	1068	https://maps.google.com/?q=-25.4048550001,-56.4363566667
COV10	0	0	0	1085	https://maps.google.com/?q=-25.4049799356,-56.4333071799
COV10	0	0	0	1047	https://maps.google.com/?q=-25.4035366668,-56.43637
COV10	0	0	0	1074	https://maps.google.com/?q=-25.4042278929,-56.4328315369
COV10	0	0	0	1027	https://maps.google.com/?q=-25.4007955966,-56.4306603799
COV10	0	0	0	1025	https://maps.google.com/?q=-25.400895955,-56.4305013638
COV10	0	0	0	982	https://maps.google.com/?q=-25.3972533139,-56.4284197975
COV10	0	0	0	982	https://maps.google.com/?q=-25.3972231399,-56.4284676102
COV10	0	0	0	928	https://maps.google.com/?q=-25.3925274282,-56.425528065
COV10	0	0	0	920	https://maps.google.com/?q=-25.3917770084,-56.4250839613
COV10	0	0	0	884	https://maps.google.com/?q=-25.3883083332,-56.4230572633
COV10	0	0	0	884	https://maps.google.com/?q=-25.3882947056,-56.4230810507
COV10	0	0	0	821	https://maps.google.com/?q=-25.3813982675,-56.4191521011
COV10	0	0	0	802	https://maps.google.com/?q=-25.3790941383,-56.4177986094
COV10	0	0	0	802	https://maps.google.com/?q=-25.3790801256,-56.4178201562
COV10	0	0	0	785	https://maps.google.com/?q=-25.3770425628,-56.4164378383
COV10	0	0	0	779	https://maps.google.com/?q=-25.3774257974,-56.4155392698
COV10	0	0	0	734	https://maps.google.com/?q=-25.3733330403,-56.4093247383
COV10	3365	3116	2914	1736	https://maps.google.com/?q=-25.4272970776,-56.4579302367
COV10	3347	3101	2898	1729	https://maps.google.com/?q=-25.4272043396,-56.4581511904
COV10	0	0	0	1704	https://maps.google.com/?q=-25.4264566668,-56.457655
COV10	3266	3036	2829	1702	https://maps.google.com/?q=-25.4267887498,-56.4591413434
COV10	3156	2946	2734	1665	https://maps.google.com/?q=-25.4261997397,-56.460544635

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV10	3084	2886	2670	1639	https://maps.google.com/?q=-25.4257826769,-56.461504803
COV10	0	0	0	1637	https://maps.google.com/?q=-25.425876482,-56.4615675263
COV10	3041	2850	2633	1625	https://maps.google.com/?q=-25.4255224733,-56.4620778375
COV10	3019	2832	2614	1617	https://maps.google.com/?q=-25.4257916668,-56.46223
COV10	2917	2747	2526	1581	https://maps.google.com/?q=-25.4256100001,-56.4635
COV10	2975	2796	2577	1602	https://maps.google.com/?q=-25.4251240485,-56.4629834228
COV10	2917	2747	2526	1581	https://maps.google.com/?q=-25.4247552272,-56.4638217051
COV10	0	0	0	1572	https://maps.google.com/?q=-25.4244279052,-56.463625276
COV10	2886	2721	2499	1570	https://maps.google.com/?q=-25.4245566235,-56.4642730985
COV10	2457	2354	2127	1410	https://maps.google.com/?q=-25.4179915458,-56.460953165
COV10	2288	2206	1981	1342	https://maps.google.com/?q=-25.4148861021,-56.4593067139
COV10	2284	2203	1978	1341	https://maps.google.com/?q=-25.4148478186,-56.4593951578
COV10	0	0	0	1311	https://maps.google.com/?q=-25.4133069805,-56.4585641276
COV10	0	0	0	1261	https://maps.google.com/?q=-25.4106948656,-56.4572209817
COV10	0	0	0	1257	https://maps.google.com/?q=-25.4106866668,-56.4569583333
COV10	0	0	0	1195	https://maps.google.com/?q=-25.4069604488,-56.4552573161
COV10	0	0	0	1048	https://maps.google.com/?q=-25.3972467107,-56.4501501706
COV10	0	0	0	914	https://maps.google.com/?q=-25.3892585834,-56.4549649015
COV10	0	0	0	903	https://maps.google.com/?q=-25.3882151209,-56.4544263678
COV10	0	0	0	903	https://maps.google.com/?q=-25.3882064478,-56.4544452162
COV10	0	0	0	841	https://maps.google.com/?q=-25.3816399442,-56.451033135
COV10	0	0	0	780	https://maps.google.com/?q=-25.3741554025,-56.4470889598
COV10	0	0	0	1038	https://maps.google.com/?q=-25.3964883498,-56.4497564271
COV10	0	0	0	991	https://maps.google.com/?q=-25.3927211409,-56.4478005595
COV10	0	0	0	991	https://maps.google.com/?q=-25.3927097981,-56.4478203283
COV10	0	0	0	924	https://maps.google.com/?q=-25.3867709933,-56.4447119695
COV10	0	0	0	811	https://maps.google.com/?q=-25.3745954036,-56.4383937993
COV10	3427	3165	2968	1754	https://maps.google.com/?q=-25.4274367993,-56.4569975902
COV10	3098	2863	2683	1540	https://maps.google.com/?q=-25.416570252,-56.4512024368
COV10	2833	2646	2453	1456	https://maps.google.com/?q=-25.4148138237,-56.4551269577
COV10	0	0	0	1453	https://maps.google.com/?q=-25.4146985914,-56.4550614701
COV10	2789	2609	2416	1442	https://maps.google.com/?q=-25.414506546,-56.4558232202
COV10	0	0	0	1415	https://maps.google.com/?q=-25.4136966668,-56.4548166667
COV10	0	0	0	1392	https://maps.google.com/?q=-25.4133802256,-56.4583752615
COV10	3097	2861	2682	1539	https://maps.google.com/?q=-25.4165242581,-56.4511776154
COV10	3040	2809	2632	1503	https://maps.google.com/?q=-25.414410199,-56.4500257235
COV10	2717	2512	2353	1307	https://maps.google.com/?q=-25.4007156891,-56.4429206012
COV10	2578	2384	2233	1226	https://maps.google.com/?q=-25.3971732534,-56.44996986
COV10	2463	2278	2133	1161	https://maps.google.com/?q=-25.3908657295,-56.4466451683
COV10	2253	2084	1951	1044	https://maps.google.com/?q=-25.3776631972,-56.4398264559
COV10	2081	1925	1802	952	https://maps.google.com/?q=-25.3644198924,-56.4360883129
COV10	0	0	0	0	https://maps.google.com/?q=-25.3585992955,-56.4378173018
COV10	3949	3650	3420	2136	https://maps.google.com/?q=-25.4418403385,-56.464233962
COV10	3669	3424	3178	2028	https://maps.google.com/?q=-25.4429366668,-56.46155
COV10	3603	3370	3120	2002	https://maps.google.com/?q=-25.4432066668,-56.4608733333
COV10	3223	3053	2791	1852	https://maps.google.com/?q=-25.4453999122,-56.4578406892
COV10	3214	3046	2783	1848	https://maps.google.com/?q=-25.4454934577,-56.4578882595
COV10	3024	2884	2619	1770	https://maps.google.com/?q=-25.4468942379,-56.4557779609

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV10	2918	2793	2527	1726	https://maps.google.com/?q=-25.4461264631,-56.4546522308
COV10	2905	2781	2516	1720	https://maps.google.com/?q=-25.4462471817,-56.4544942596
COV10	2885	2764	2498	1712	https://maps.google.com/?q=-25.446279336,-56.4542515214
COV10	2851	2735	2469	1698	https://maps.google.com/?q=-25.4465698525,-56.4538324369
COV10	2738	2636	2371	1649	https://maps.google.com/?q=-25.4453449335,-56.4525388409
COV10	2698	2601	2336	1632	https://maps.google.com/?q=-25.4450145435,-56.4519541168
COV10	2612	2526	2262	1594	https://maps.google.com/?q=-25.4444365112,-56.4505460113
COV10	2633	2544	2280	1603	https://maps.google.com/?q=-25.4456931217,-56.4510623021
COV10	2588	2505	2242	1583	https://maps.google.com/?q=-25.4461706864,-56.4504346633
COV10	2511	2437	2175	1548	https://maps.google.com/?q=-25.4471937206,-56.4514083868
COV10	2553	2473	2211	1567	https://maps.google.com/?q=-25.4465472927,-56.4498972107
COV10	2519	2444	2182	1552	https://maps.google.com/?q=-25.4469182544,-56.449399347
COV10	2369	2310	2051	1483	https://maps.google.com/?q=-25.4488125129,-56.4471022604
COV10	2341	2285	2028	1471	https://maps.google.com/?q=-25.4491606233,-56.4466393799
COV10	2313	2260	2004	1457	https://maps.google.com/?q=-25.4487194907,-56.446233742
COV10	2493	2421	2159	1540	https://maps.google.com/?q=-25.4465555142,-56.449067594
COV10	2703	2606	2341	1634	https://maps.google.com/?q=-25.4450017286,-56.4530054881
COV10	2681	2586	2321	1624	https://maps.google.com/?q=-25.4448480136,-56.4533606692
COV10	2659	2568	2303	1615	https://maps.google.com/?q=-25.4445756435,-56.4531360718
COV10	2640	2551	2287	1606	https://maps.google.com/?q=-25.4443343097,-56.4529191888
COV10	0	0	0	1587	https://maps.google.com/?q=-25.4439638501,-56.4535842598
COV10	2592	2509	2245	1585	https://maps.google.com/?q=-25.4437350001,-56.45233
COV10	0	0	0	1565	https://maps.google.com/?q=-25.4430438485,-56.451957593
COV10	2524	2448	2185	1554	https://maps.google.com/?q=-25.4436835941,-56.4559820655
COV10	2349	2292	2034	1474	https://maps.google.com/?q=-25.4426733334,-56.4591316667
COV10	2739	2637	2372	1649	https://maps.google.com/?q=-25.4477413965,-56.453434678
COV10	3019	2880	2614	1768	https://maps.google.com/?q=-25.4477345591,-56.4589737873
COV10	2995	2859	2594	1758	https://maps.google.com/?q=-25.4480229436,-56.4591134764
COV10	2787	2679	2414	1670	https://maps.google.com/?q=-25.4467638487,-56.4620459284
COV10	2944	2816	2550	1737	https://maps.google.com/?q=-25.4486525547,-56.4594131138
COV10	2885	2764	2499	1712	https://maps.google.com/?q=-25.4493906338,-56.4598209626
COV10	0	0	0	1696	https://maps.google.com/?q=-25.4491331868,-56.4603487964
COV10	0	0	0	1645	https://maps.google.com/?q=-25.4483321809,-56.4620975938
COV10	2856	2739	2474	1700	https://maps.google.com/?q=-25.4497811179,-56.4599680036
COV10	0	0	0	1719	https://maps.google.com/?q=-25.4484350001,-56.4600366667
COV10	0	0	0	1674	https://maps.google.com/?q=-25.4477850001,-56.46156
COV10	0	0	0	1645	https://maps.google.com/?q=-25.4473407547,-56.4625614651
COV10	0	0	0	1644	https://maps.google.com/?q=-25.44737966,-56.4625798287
COV10	3484	3272	3017	1956	https://maps.google.com/?q=-25.4422616668,-56.46144
COV10	4419	4125	3827	2636	https://maps.google.com/?q=-25.4576274741,-56.4699110106
COV12	9084	12880	7867	12566	https://maps.google.com/?q=-25.472293749,-56.4481694319
COV12	9033	12370	7823	12257	https://maps.google.com/?q=-25.4722021992,-56.4485067566
COV12	8871	11140	7683	11361	https://maps.google.com/?q=-25.47157259,-56.44891893
COV12	8763	10514	7589	10818	https://maps.google.com/?q=-25.4708753685,-56.4489061316
COV12	8311	8836	7198	9011	https://maps.google.com/?q=-25.4684242429,-56.4475958397
COV12	8290	8802	7180	8968	https://maps.google.com/?q=-25.4683766668,-56.44765
COV12	8172	8472	7077	8547	https://maps.google.com/?q=-25.467634104,-56.4470640385
COV12	8111	8327	7025	8354	https://maps.google.com/?q=-25.4672467647,-56.4468953605

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV12	8041	8222	6964	8223	https://maps.google.com/?q=-25.4672874484,-56.446640627
COV12	7992	8062	6922	7995	https://maps.google.com/?q=-25.4664819502,-56.4465421773
COV12	7961	7997	6895	7905	https://maps.google.com/?q=-25.4662782696,-56.4466344053
COV12	7868	7810	6814	7643	https://maps.google.com/?q=-25.4657022067,-56.4466508626
COV12	7482	7154	6479	6677	https://maps.google.com/?q=-25.4637122231,-56.447769479
COV12	7458	7123	6459	6623	https://maps.google.com/?q=-25.4635958591,-56.447934435
COV12	7354	6992	6369	6394	https://maps.google.com/?q=-25.462922944,-56.4470597496
COV12	6841	6408	5924	5399	https://maps.google.com/?q=-25.4595501634,-56.443938483
COV12	6627	6185	5739	5041	https://maps.google.com/?q=-25.4580088417,-56.4425170364
COV12	6001	5563	5197	4139	https://maps.google.com/?q=-25.4529408979,-56.4378556844
COV12	5985	5548	5183	4118	https://maps.google.com/?q=-25.4526559335,-56.4375989207
COV12	5900	5466	5110	4010	https://maps.google.com/?q=-25.4511080161,-56.4362052836
COV12	5811	5381	5032	3900	https://maps.google.com/?q=-25.4494588635,-56.4346875364
COV12	5790	5361	5015	3875	https://maps.google.com/?q=-25.4490739518,-56.4343287694
COV12	5755	5331	4984	3847	https://maps.google.com/?q=-25.4487053746,-56.4339779304
COV12	5722	5306	4955	3825	https://maps.google.com/?q=-25.4484469943,-56.4337462965
COV12	5747	5324	4977	3841	https://maps.google.com/?q=-25.4487792996,-56.4338770634
COV12	5703	5287	4939	3807	https://maps.google.com/?q=-25.4491661709,-56.4333491935
COV12	5632	5226	4878	3753	https://maps.google.com/?q=-25.4497930523,-56.4324943729
COV12	5568	5171	4822	3704	https://maps.google.com/?q=-25.4503514571,-56.4316778861
COV12	5492	5112	4757	3656	https://maps.google.com/?q=-25.4510534431,-56.4320606838
COV12	5482	5104	4747	3649	https://maps.google.com/?q=-25.451101068,-56.4319492139
COV12	5370	5016	4651	3579	https://maps.google.com/?q=-25.4516185575,-56.4307903091
COV12	5390	5031	4668	3591	https://maps.google.com/?q=-25.4510129255,-56.4325088641
COV12	5481	5103	4747	3649	https://maps.google.com/?q=-25.4511078296,-56.432088485
COV12	5431	5064	4703	3617	https://maps.google.com/?q=-25.4513433334,-56.4315716667
COV12	5558	5163	4813	3697	https://maps.google.com/?q=-25.4502245019,-56.4316055084
COV12	5553	5160	4809	3694	https://maps.google.com/?q=-25.4502566668,-56.43157
COV12	5534	5142	4792	3679	https://maps.google.com/?q=-25.4499120718,-56.4314271462
COV12	5361	5006	4643	3570	https://maps.google.com/?q=-25.4509107089,-56.4297595047
COV12	5307	4963	4596	3536	https://maps.google.com/?q=-25.451180981,-56.4291971386
COV12	5122	4814	4436	3422	https://maps.google.com/?q=-25.4518173588,-56.4271029639
COV12	5016	4727	4344	3357	https://maps.google.com/?q=-25.4523925386,-56.4259593525
COV12	4938	4663	4276	3310	https://maps.google.com/?q=-25.452730952,-56.425061831
COV12	5274	4936	4567	3515	https://maps.google.com/?q=-25.4513948184,-56.429521899
COV12	5530	5139	4789	3676	https://maps.google.com/?q=-25.4498676077,-56.4314017623
COV12	5280	4941	4573	3519	https://maps.google.com/?q=-25.4509150016,-56.4287849992
COV12	5523	5134	4783	3671	https://maps.google.com/?q=-25.4497770699,-56.4313500757
COV12	5519	5130	4780	3668	https://maps.google.com/?q=-25.4497232974,-56.4313193779
COV12	5505	5118	4767	3657	https://maps.google.com/?q=-25.4495348589,-56.4312118017
COV12	5445	5071	4716	3619	https://maps.google.com/?q=-25.4498450001,-56.4306116667
COV12	5499	5113	4763	3653	https://maps.google.com/?q=-25.4494599747,-56.4311798808
COV12	5443	5064	4713	3610	https://maps.google.com/?q=-25.4487140377,-56.4307427392
COV12	5315	4954	4603	3516	https://maps.google.com/?q=-25.4495400002,-56.4287883328
COV12	5303	4944	4592	3507	https://maps.google.com/?q=-25.4496197567,-56.4286061395
COV12	5219	4877	4520	3455	https://maps.google.com/?q=-25.4502463335,-56.4284867295
COV12	5233	4884	4532	3456	https://maps.google.com/?q=-25.4500993256,-56.4275211471
COV12	5143	4806	4454	3391	https://maps.google.com/?q=-25.4507173467,-56.4260700611

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COV12	5030	4707	4356	3309	https://maps.google.com/?q=-25.4515415485,-56.4241999451
COV12	5165	4829	4473	3414	https://maps.google.com/?q=-25.4494404685,-56.4270950024
COV12	5362	5001	4644	3560	https://maps.google.com/?q=-25.4479608204,-56.4302965677
COV12	5627	5228	4873	3758	https://maps.google.com/?q=-25.4486070882,-56.432769167
COV12	5764	5336	4992	3843	https://maps.google.com/?q=-25.4491019349,-56.4351813424
COV12	5723	5297	4956	3794	https://maps.google.com/?q=-25.4487715571,-56.4356210029
COV12	6737	6323	5834	5297	https://maps.google.com/?q=-25.4598199847,-56.4435915081
COV12	6729	6317	5828	5290	https://maps.google.com/?q=-25.4597990432,-56.4435699787
COV12	7276	6921	6301	6296	https://maps.google.com/?q=-25.4627467316,-56.4473080581
COV12	7960	7995	6894	7903	https://maps.google.com/?q=-25.4662758566,-56.4466289671
COV12	7998	8075	6927	8013	https://maps.google.com/?q=-25.4679405888,-56.445782012
COV12	7996	8070	6925	8005	https://maps.google.com/?q=-25.4679448546,-56.4457630443
COV12	7997	8072	6926	8009	https://maps.google.com/?q=-25.4679311018,-56.4457793255
COV12	7995	8068	6924	8003	https://maps.google.com/?q=-25.4679181239,-56.4457756505
COV12	8833	10901	7649	11161	https://maps.google.com/?q=-25.4718215338,-56.4489353779
COV14	9084	12880	7867	12566	https://maps.google.com/?q=-25.4718979663,-56.4480452628
COV14	9058	12608	7845	12409	https://maps.google.com/?q=-25.4718986337,-56.4482227301
COV14	8761	10503	7588	10807	https://maps.google.com/?q=-25.4720255876,-56.4497349281
COV14	8158	8436	7065	8500	https://maps.google.com/?q=-25.4696985466,-56.4531805604
COV14	8155	8431	7063	8492	https://maps.google.com/?q=-25.4697106837,-56.4531903537
COV14	7637	7392	6614	7044	https://maps.google.com/?q=-25.469785064,-56.4562450624
COV14	7303	6930	6324	6284	https://maps.google.com/?q=-25.4683925311,-56.4586944561
COV14	7009	6591	6070	5702	https://maps.google.com/?q=-25.4662510883,-56.4572989642
COV14	6122	5681	5302	4298	https://maps.google.com/?q=-25.4666744845,-56.4668504198
COV14	5237	4840	4536	3257	https://maps.google.com/?q=-25.4686827221,-56.4791473087
COV14	5227	4832	4527	3247	https://maps.google.com/?q=-25.4686988115,-56.4792534804
COV14	5225	4828	4525	3244	https://maps.google.com/?q=-25.4684991209,-56.4791683926
COV14	5223	4826	4523	3241	https://maps.google.com/?q=-25.468463375,-56.4791723266
COV14	5207	4814	4509	3227	https://maps.google.com/?q=-25.4684421198,-56.4790100727
COV14	5017	4634	4345	3036	https://maps.google.com/?q=-25.4690275502,-56.482608713
COV14	4902	4527	4246	2926	https://maps.google.com/?q=-25.4693506272,-56.48465706
COV14	4747	4383	4111	2782	https://maps.google.com/?q=-25.4697927001,-56.4875803595
COV14	4692	4340	4063	2756	https://maps.google.com/?q=-25.4697844487,-56.4876181062
COV14	4329	4050	3749	2586	https://maps.google.com/?q=-25.4675169539,-56.4864612522
COV14	4130	3887	3577	2493	https://maps.google.com/?q=-25.4661415705,-56.4857723153
COV14	0	0	0	2329	https://maps.google.com/?q=-25.4635136664,-56.4845179528
COV14	0	0	0	2085	https://maps.google.com/?q=-25.4585997466,-56.4838863578
COV14	0	0	0	1888	https://maps.google.com/?q=-25.4538687013,-56.4832774008
COV14	0	0	0	2018	https://maps.google.com/?q=-25.4587658197,-56.4822131091
COV14	0	0	0	2455	https://maps.google.com/?q=-25.4665681092,-56.4886018689
COV14	0	0	0	2755	https://maps.google.com/?q=-25.469786593,-56.4876571738
COV14	0	0	0	2751	https://maps.google.com/?q=-25.4697907811,-56.4877065549
COV14	4702	4342	4072	2743	https://maps.google.com/?q=-25.4698791497,-56.4884432122
COV14	4542	4193	3933	2601	https://maps.google.com/?q=-25.4694864042,-56.4917286476
COV14	4491	4153	3889	2579	https://maps.google.com/?q=-25.4693832849,-56.4917148265
COV14	4298	3968	3722	2397	https://maps.google.com/?q=-25.4694359165,-56.4971106558
COV14	3839	3552	3325	2124	https://maps.google.com/?q=-25.470627776,-56.5057084912
COV14	3622	3354	3137	1996	https://maps.google.com/?q=-25.4709037155,-56.5106142664

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV14	0	0	0	1975	https://maps.google.com/?q=-25.4706914763,-56.5106663783
COV14	3503	3246	3034	1927	https://maps.google.com/?q=-25.4710775569,-56.5135678682
COV14	3494	3238	3026	1921	https://maps.google.com/?q=-25.4710885184,-56.5137979059
COV14	3190	2991	2763	1801	https://maps.google.com/?q=-25.4679549834,-56.5127917369
COV14	3130	2941	2711	1777	https://maps.google.com/?q=-25.4671723306,-56.5127765789
COV14	0	0	0	1372	https://maps.google.com/?q=-25.4534433698,-56.505437866
COV14	3016	2846	2612	1730	https://maps.google.com/?q=-25.4670537909,-56.5140654538
COV14	3364	3119	2913	1846	https://maps.google.com/?q=-25.4712825141,-56.51727811
COV14	3112	2914	2695	1747	https://maps.google.com/?q=-25.4679596794,-56.5171123146
COV14	3317	3076	2872	1819	https://maps.google.com/?q=-25.4713158204,-56.5185929913
COV14	3313	3073	2869	1817	https://maps.google.com/?q=-25.4712659737,-56.5185931898
COV14	3184	2969	2758	1767	https://maps.google.com/?q=-25.4697175599,-56.5187352399
COV14	3301	3061	2858	1809	https://maps.google.com/?q=-25.471317334,-56.5190546679
COV14	3235	3001	2801	1771	https://maps.google.com/?q=-25.4714046475,-56.5209845155
COV14	3209	2978	2779	1757	https://maps.google.com/?q=-25.471447631,-56.5217595871
COV14	3207	2976	2778	1756	https://maps.google.com/?q=-25.471450887,-56.5218165758
COV14	3205	2974	2776	1755	https://maps.google.com/?q=-25.4714506278,-56.5218712884
COV14	0	0	0	1682	https://maps.google.com/?q=-25.469258665,-56.5218379149
COV14	3059	2840	2649	1671	https://maps.google.com/?q=-25.4722354361,-56.5264380961
COV14	0	0	0	1669	https://maps.google.com/?q=-25.4721786499,-56.5264425961
COV14	2947	2738	2552	1607	https://maps.google.com/?q=-25.4733521894,-56.5301101381
COV14	2925	2718	2533	1594	https://maps.google.com/?q=-25.4735684051,-56.5308815695
COV14	0	0	0	1594	https://maps.google.com/?q=-25.4735477431,-56.5308870216
COV14	0	0	0	1592	https://maps.google.com/?q=-25.4734961329,-56.5309005523
COV14	2781	2586	2409	1513	https://maps.google.com/?q=-25.4751189501,-56.5361206629
COV14	2775	2580	2403	1509	https://maps.google.com/?q=-25.4750272912,-56.5363666667
COV14	2765	2572	2395	1504	https://maps.google.com/?q=-25.4747753797,-56.5364159478
COV14	2634	2458	2281	1443	https://maps.google.com/?q=-25.4711952169,-56.5371162337
COV14	2306	2171	1997	1288	https://maps.google.com/?q=-25.4607106579,-56.5391667764
COV14	1912	1834	1656	1130	https://maps.google.com/?q=-25.4625605151,-56.5274526276
COV14	2182	2060	1890	1228	https://maps.google.com/?q=-25.4562646961,-56.5405021576
COV14	0	0	0	1227	https://maps.google.com/?q=-25.4562810676,-56.5405814626
COV14	2083	1972	1804	1180	https://maps.google.com/?q=-25.4523152422,-56.5420667125
COV14	1805	1734	1563	1068	https://maps.google.com/?q=-25.4560197947,-56.55083144
COV14	1947	1850	1686	1113	https://maps.google.com/?q=-25.4467977676,-56.5447595615
COV14	1903	1810	1648	1092	https://maps.google.com/?q=-25.4446811072,-56.5456005916
COV14	1717	1650	1487	1016	https://maps.google.com/?q=-25.4459781372,-56.5528373783
COV14	0	0	0	939	https://maps.google.com/?q=-25.4393085943,-56.5562698114
COV14	0	0	0	905	https://maps.google.com/?q=-25.4362672949,-56.5586116618
COV14	0	0	0	888	https://maps.google.com/?q=-25.4403742833,-56.5624606272
COV14	0	0	0	833	https://maps.google.com/?q=-25.4416629433,-56.5699612136
COV14	0	0	0	822	https://maps.google.com/?q=-25.4431464907,-56.5704684458
COV14	0	0	0	821	https://maps.google.com/?q=-25.4431500155,-56.5703838174
COV14	0	0	0	776	https://maps.google.com/?q=-25.4478725216,-56.5680919203
COV14	0	0	0	817	https://maps.google.com/?q=-25.4395403937,-56.5691595051
COV14	0	0	0	765	https://maps.google.com/?q=-25.4348915082,-56.5740053599
COV14	0	0	0	760	https://maps.google.com/?q=-25.4355750205,-56.5742737131
COV14	0	0	0	756	https://maps.google.com/?q=-25.4361662396,-56.5745055417

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV14	0	0	0	689	https://maps.google.com/?q=-25.4438134921,-56.5817485407
COV14	0	0	0	707	https://maps.google.com/?q=-25.4362214075,-56.5836127379
COV14	0	0	0	762	https://maps.google.com/?q=-25.434421906,-56.5738135393
COV14	0	0	0	718	https://maps.google.com/?q=-25.4275459648,-56.5711270346
COV14	0	0	0	708	https://maps.google.com/?q=-25.4259276735,-56.5707183947
COV14	0	0	0	644	https://maps.google.com/?q=-25.4199667071,-56.5634436952
COV14	0	0	0	609	https://maps.google.com/?q=-25.4253264127,-56.5895758992
COV14	0	0	0	555	https://maps.google.com/?q=-25.4148065769,-56.5952383447
COV14	0	0	0	555	https://maps.google.com/?q=-25.4148065279,-56.5951523713
COV14	0	0	0	519	https://maps.google.com/?q=-25.4080161624,-56.5966668742
COV14	0	0	0	518	https://maps.google.com/?q=-25.4104383735,-56.6047640144
COV14	0	0	0	470	https://maps.google.com/?q=-25.3992092438,-56.618998726
COV14	0	0	0	760	https://maps.google.com/?q=-25.4344672031,-56.5734848437
COV14	1680	1618	1455	1000	https://maps.google.com/?q=-25.4474284683,-56.5529003972
COV14	0	0	0	970	https://maps.google.com/?q=-25.4504265624,-56.5531783629
COV14	1872	1783	1621	1076	https://maps.google.com/?q=-25.4431476558,-56.5461820364
COV14	1844	1757	1597	1062	https://maps.google.com/?q=-25.4415958303,-56.5463132801
COV14	0	0	0	1057	https://maps.google.com/?q=-25.4415703044,-56.5467952162
COV14	1781	1700	1542	1031	https://maps.google.com/?q=-25.4380046042,-56.546616989
COV14	1645	1576	1425	962	https://maps.google.com/?q=-25.4293443027,-56.5473491575
COV14	0	0	0	925	https://maps.google.com/?q=-25.4308488894,-56.5432517682
COV14	1645	1576	1425	961	https://maps.google.com/?q=-25.42933162,-56.5473501997
COV14	1645	1576	1424	961	https://maps.google.com/?q=-25.4293224155,-56.547350956
COV14	1633	1565	1415	955	https://maps.google.com/?q=-25.4285235666,-56.5474165972
COV14	1606	1540	1391	942	https://maps.google.com/?q=-25.4266050876,-56.5475742339
COV14	1475	1420	1278	874	https://maps.google.com/?q=-25.4163644766,-56.548436249
COV14	0	0	0	793	https://maps.google.com/?q=-25.4162156452,-56.5362305214
COV14	0	0	0	791	https://maps.google.com/?q=-25.4160024942,-56.5362256269
COV14	0	0	0	742	https://maps.google.com/?q=-25.4127358063,-56.528356253
COV14	0	0	0	792	https://maps.google.com/?q=-25.4162142417,-56.5361158142
COV14	1395	1346	1208	831	https://maps.google.com/?q=-25.409211766,-56.5490388116
COV14	1385	1336	1199	827	https://maps.google.com/?q=-25.409217565,-56.5497209567
COV14	1395	1346	1208	831	https://maps.google.com/?q=-25.4092014974,-56.5490393535
COV14	1379	1330	1194	823	https://maps.google.com/?q=-25.4076134666,-56.549125134
COV14	1355	1308	1174	810	https://maps.google.com/?q=-25.4053047827,-56.5492342329
COV14	1336	1291	1157	800	https://maps.google.com/?q=-25.403400162,-56.5493242338
COV14	1331	1286	1153	797	https://maps.google.com/?q=-25.4028522794,-56.5493501045
COV14	1325	1281	1148	794	https://maps.google.com/?q=-25.4022556236,-56.5493783162
COV14	0	0	0	769	https://maps.google.com/?q=-25.4021231605,-56.5451362597
COV14	1314	1270	1138	788	https://maps.google.com/?q=-25.4022926318,-56.550724981
COV14	1297	1255	1124	779	https://maps.google.com/?q=-25.4023400071,-56.5526819553
COV14	1269	1229	1099	764	https://maps.google.com/?q=-25.4024948049,-56.5561033834
COV14	0	0	0	764	https://maps.google.com/?q=-25.4024370599,-56.5561924111
COV14	0	0	0	759	https://maps.google.com/?q=-25.402989935,-56.5565116899
COV14	0	0	0	708	https://maps.google.com/?q=-25.3968303484,-56.5648356833
COV14	1269	1229	1099	764	https://maps.google.com/?q=-25.402466668,-56.5561006098
COV14	1265	1224	1095	762	https://maps.google.com/?q=-25.4019523441,-56.5561362564
COV14	0	0	0	761	https://maps.google.com/?q=-25.4019442316,-56.5563377086

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV14	1193	1157	1033	723	https://maps.google.com/?q=-25.3933891116,-56.5568409263
COV14	1114	1083	965	679	https://maps.google.com/?q=-25.3859699649,-56.5656397738
COV14	0	0	0	653	https://maps.google.com/?q=-25.3904974519,-56.5692286222
COV14	1103	1072	955	673	https://maps.google.com/?q=-25.38486047,-56.5669542373
COV14	0	0	0	649	https://maps.google.com/?q=-25.3805858232,-56.5639630653
COV14	1097	1067	950	670	https://maps.google.com/?q=-25.3842990147,-56.5676201151
COV14	0	0	0	599	https://maps.google.com/?q=-25.392021424,-56.5835552925
COV14	1049	1021	908	643	https://maps.google.com/?q=-25.3790382649,-56.5737808198
COV14	1030	1003	892	632	https://maps.google.com/?q=-25.3758317843,-56.5736085183
COV14	0	0	0	590	https://maps.google.com/?q=-25.3712039655,-56.583009899
COV14	0	0	0	574	https://maps.google.com/?q=-25.3711432441,-56.5878637345
COV14	0	0	0	537	https://maps.google.com/?q=-25.3819799281,-56.5894182589
COV14	0	0	0	517	https://maps.google.com/?q=-25.3887393129,-56.5897784606
COV14	0	0	0	501	https://maps.google.com/?q=-25.3898200001,-56.5957
COV14	0	0	0	573	https://maps.google.com/?q=-25.3707397198,-56.5878540219
COV14	0	0	0	549	https://maps.google.com/?q=-25.3702278678,-56.5954085018
COV14	0	0	0	505	https://maps.google.com/?q=-25.3683441681,-56.6110402284
COV14	0	0	0	544	https://maps.google.com/?q=-25.3706899502,-56.5967196531
COV14	0	0	0	571	https://maps.google.com/?q=-25.3702863354,-56.5878431051
COV14	1016	991	880	625	https://maps.google.com/?q=-25.3735308566,-56.5734859839
COV14	942	920	816	583	https://maps.google.com/?q=-25.3593656554,-56.5726510619
COV14	0	0	0	554	https://maps.google.com/?q=-25.3615382847,-56.5640766981
COV14	0	0	0	534	https://maps.google.com/?q=-25.3585603585,-56.5602403301
COV14	0	0	0	529	https://maps.google.com/?q=-25.3574337621,-56.5590287628
COV14	0	0	0	497	https://maps.google.com/?q=-25.3639977885,-56.5478182744
COV14	904	885	783	562	https://maps.google.com/?q=-25.3514532885,-56.5732784102
COV14	901	881	780	560	https://maps.google.com/?q=-25.3506493488,-56.5733420268
COV14	901	881	780	560	https://maps.google.com/?q=-25.3506452396,-56.573342352
COV14	863	845	747	538	https://maps.google.com/?q=-25.342006102,-56.5757675681
COV14	0	0	0	503	https://maps.google.com/?q=-25.3402174423,-56.5647677267
COV14	0	0	0	462	https://maps.google.com/?q=-25.3447898097,-56.5481925032
COV14	0	0	0	449	https://maps.google.com/?q=-25.343167048,-56.5419955852
COV14	0	0	0	441	https://maps.google.com/?q=-25.3405862995,-56.5391086956
COV14	0	0	0	425	https://maps.google.com/?q=-25.3332333501,-56.5372277948
COV14	830	813	719	519	https://maps.google.com/?q=-25.3350653807,-56.5805508349
COV14	828	811	717	518	https://maps.google.com/?q=-25.3346672968,-56.5808972368
COV14	0	0	0	500	https://maps.google.com/?q=-25.3331794578,-56.5742451401
COV14	819	803	709	512	https://maps.google.com/?q=-25.3328106596,-56.5825696618
COV14	810	795	702	507	https://maps.google.com/?q=-25.3309854075,-56.5842137481
COV14	775	761	671	487	https://maps.google.com/?q=-25.3228894605,-56.5830086987
COV14	0	0	0	483	https://maps.google.com/?q=-25.3225473031,-56.584281157
COV14	772	758	668	485	https://maps.google.com/?q=-25.3222032094,-56.5837184004
COV14	0	0	0	482	https://maps.google.com/?q=-25.3213529758,-56.5832357728
COV14	0	0	0	471	https://maps.google.com/?q=-25.3184873663,-56.5840450361
COV14	704	692	610	445	https://maps.google.com/?q=-25.3072866256,-56.602251501
COV14	697	686	604	441	https://maps.google.com/?q=-25.3060319957,-56.6045243766
COV14	0	0	0	405	https://maps.google.com/?q=-25.2968822347,-56.6166036811
COV14	0	0	0	393	https://maps.google.com/?q=-25.2906882652,-56.613733678

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV14	0	0	0	379	https://maps.google.com/?q=-25.2832974973,-56.622643746
COV14	0	0	0	377	https://maps.google.com/?q=-25.2827539162,-56.6238954442
COV14	0	0	0	366	https://maps.google.com/?q=-25.275448507,-56.6206187906
COV14	0	0	0	353	https://maps.google.com/?q=-25.2786591374,-56.611232123
COV14	0	0	0	341	https://maps.google.com/?q=-25.2576638432,-56.6168459881
COV14	0	0	0	502	https://maps.google.com/?q=-25.3315380724,-56.5856066417
COV14	0	0	0	480	https://maps.google.com/?q=-25.3337205296,-56.5909834145
COV14	0	0	0	558	https://maps.google.com/?q=-25.3507526169,-56.5738381298
COV14	0	0	0	527	https://maps.google.com/?q=-25.350192311,-56.5849453243
COV14	1336	1290	1157	800	https://maps.google.com/?q=-25.4033965743,-56.5492762877
COV14	0	0	0	944	https://maps.google.com/?q=-25.4289169906,-56.5461332778
COV14	0	0	0	933	https://maps.google.com/?q=-25.4284337856,-56.5452970076
COV14	0	0	0	939	https://maps.google.com/?q=-25.4291070669,-56.5455135259
COV14	0	0	0	959	https://maps.google.com/?q=-25.4293233643,-56.5476583508
COV14	0	0	0	977	https://maps.google.com/?q=-25.4383399926,-56.5409388939
COV14	0	0	0	1062	https://maps.google.com/?q=-25.4460757516,-56.5401619455
COV14	0	0	0	969	https://maps.google.com/?q=-25.4485165802,-56.5312830499
COV14	0	0	0	961	https://maps.google.com/?q=-25.4487159016,-56.5304120632
COV14	0	0	0	892	https://maps.google.com/?q=-25.4481037774,-56.5225957285
COV14	0	0	0	939	https://maps.google.com/?q=-25.4468154715,-56.5316255277
COV14	0	0	0	939	https://maps.google.com/?q=-25.4467721669,-56.5316237072
COV14	2761	2568	2391	1501	https://maps.google.com/?q=-25.4753082353,-56.5367811973
COV14	2663	2478	2307	1446	https://maps.google.com/?q=-25.476462105,-56.5407379124
COV14	2534	2358	2194	1373	https://maps.google.com/?q=-25.4781897714,-56.5464698305
COV14	2438	2280	2111	1337	https://maps.google.com/?q=-25.4765283407,-56.5469398237
COV14	2280	2149	1975	1277	https://maps.google.com/?q=-25.4730488557,-56.5480165516
COV14	2190	2073	1896	1242	https://maps.google.com/?q=-25.4709507263,-56.548699125
COV14	2165	2052	1875	1232	https://maps.google.com/?q=-25.4710651605,-56.5479991596
COV14	2166	2053	1876	1233	https://maps.google.com/?q=-25.4703476747,-56.5486335679
COV14	0	0	0	1086	https://maps.google.com/?q=-25.4620427495,-56.5547886687
COV14	2179	2064	1887	1238	https://maps.google.com/?q=-25.4720403315,-56.5460628505
COV14	2459	2289	2129	1331	https://maps.google.com/?q=-25.4792001573,-56.5499955128
COV14	2458	2289	2129	1331	https://maps.google.com/?q=-25.4791908687,-56.5499996263
COV14	2247	2095	1946	1213	https://maps.google.com/?q=-25.4825754824,-56.5613157063
COV14	0	0	0	1207	https://maps.google.com/?q=-25.4825428811,-56.5613329752
COV14	0	0	0	1195	https://maps.google.com/?q=-25.4817382478,-56.5617150691
COV14	0	0	0	1191	https://maps.google.com/?q=-25.4815950001,-56.5614816667
COV14	0	0	0	1065	https://maps.google.com/?q=-25.4721891544,-56.5662184934
COV14	0	0	0	1052	https://maps.google.com/?q=-25.4711390891,-56.5667477289
COV14	0	0	0	890	https://maps.google.com/?q=-25.4683874221,-56.5836483777
COV14	0	0	0	819	https://maps.google.com/?q=-25.4670671701,-56.5930007035
COV14	0	0	0	789	https://maps.google.com/?q=-25.466068127,-56.5976619464
COV14	0	0	0	782	https://maps.google.com/?q=-25.4658384834,-56.59873778
COV14	0	0	0	663	https://maps.google.com/?q=-25.4456119584,-56.6006558747
COV14	0	0	0	812	https://maps.google.com/?q=-25.4681142193,-56.5931559108
COV14	0	0	0	975	https://maps.google.com/?q=-25.4644377188,-56.5698427554
COV14	0	0	0	932	https://maps.google.com/?q=-25.4602243622,-56.5716029891
COV14	0	0	0	913	https://maps.google.com/?q=-25.4593793189,-56.5737406081

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV14	0	0	0	928	https://maps.google.com/?q=-25.4597816668,-56.5717566667
COV14	1972	1840	1708	1061	https://maps.google.com/?q=-25.4879973989,-56.5796720398
COV14	1937	1808	1677	1041	https://maps.google.com/?q=-25.4887991768,-56.5823819561
COV14	1584	1481	1372	848	https://maps.google.com/?q=-25.4987853104,-56.6162349714
COV14	1351	1264	1170	721	https://maps.google.com/?q=-25.508316763,-56.6483749464
COV14	0	0	0	701	https://maps.google.com/?q=-25.5046683334,-56.6480833333
COV14	1350	1264	1169	721	https://maps.google.com/?q=-25.5083431017,-56.6484565565
COV14	1350	1263	1169	721	https://maps.google.com/?q=-25.5083082375,-56.6484536727
COV14	1346	1261	1166	720	https://maps.google.com/?q=-25.5080647315,-56.6484338826
COV14	1347	1261	1166	719	https://maps.google.com/?q=-25.5085113444,-56.6490248703
COV14	1345	1260	1165	719	https://maps.google.com/?q=-25.5084295091,-56.6490164508
COV14	1308	1224	1133	698	https://maps.google.com/?q=-25.5104326873,-56.6555152545
COV14	1295	1212	1121	691	https://maps.google.com/?q=-25.5111159683,-56.6577647534
COV14	1287	1206	1114	688	https://maps.google.com/?q=-25.5109835461,-56.6578231401
COV14	1249	1174	1081	675	https://maps.google.com/?q=-25.5081207337,-56.6572647719
COV14	1240	1166	1074	672	https://maps.google.com/?q=-25.5081186586,-56.6564743008
COV14	1067	1020	924	608	https://maps.google.com/?q=-25.4922434881,-56.6538201215
COV14	1054	1008	913	603	https://maps.google.com/?q=-25.4924896337,-56.6523436843
COV14	971	936	841	570	https://maps.google.com/?q=-25.4816622961,-56.6523263591
COV14	931	901	806	553	https://maps.google.com/?q=-25.4767261547,-56.6516507227
COV14	911	883	789	545	https://maps.google.com/?q=-25.4751113762,-56.6497543468
COV14	903	875	782	541	https://maps.google.com/?q=-25.4739324291,-56.6499621468
COV14	841	820	728	515	https://maps.google.com/?q=-25.4670935617,-56.642991249
COV14	696	688	603	448	https://maps.google.com/?q=-25.4416965511,-56.6516266748
COV14	696	688	602	448	https://maps.google.com/?q=-25.4416640892,-56.6515955887
COV14	678	672	587	439	https://maps.google.com/?q=-25.4380232639,-56.6496361688
COV14	674	668	584	437	https://maps.google.com/?q=-25.4371492032,-56.6498143299
COV14	666	661	577	433	https://maps.google.com/?q=-25.4353483334,-56.6500816667
COV14	654	649	566	427	https://maps.google.com/?q=-25.4356933334,-56.65327
COV14	658	653	570	429	https://maps.google.com/?q=-25.4334708257,-56.6504644628
COV14	658	653	569	429	https://maps.google.com/?q=-25.4333216668,-56.6505566667
COV14	655	650	567	427	https://maps.google.com/?q=-25.4326388608,-56.6508512495
COV14	642	638	556	421	https://maps.google.com/?q=-25.4299081507,-56.6500282045
COV14	641	638	555	421	https://maps.google.com/?q=-25.4297466668,-56.650075
COV14	1293	1211	1120	690	https://maps.google.com/?q=-25.5112070222,-56.6580529167
COV14	1266	1186	1097	675	https://maps.google.com/?q=-25.512635131,-56.6629079536
COV14	1249	1170	1082	666	https://maps.google.com/?q=-25.5135462253,-56.6660226288
COV14	1185	1110	1026	632	https://maps.google.com/?q=-25.5173173514,-56.6788290101
COV14	873	843	756	515	https://maps.google.com/?q=-25.4856400001,-56.6696833333
COV14	1167	1094	1011	622	https://maps.google.com/?q=-25.5184182921,-56.6825756857
COV14	1167	1093	1010	622	https://maps.google.com/?q=-25.5184640203,-56.682745949
COV14	1142	1070	989	608	https://maps.google.com/?q=-25.5200639956,-56.6881774903
COV14	0	0	0	606	https://maps.google.com/?q=-25.5196916668,-56.6883733333
COV14	1142	1070	989	608	https://maps.google.com/?q=-25.5200925571,-56.6882716207
COV14	1127	1056	976	600	https://maps.google.com/?q=-25.5210951007,-56.6916829141
COV14	1114	1045	965	596	https://maps.google.com/?q=-25.5202521556,-56.6918070953
COV14	1097	1031	950	590	https://maps.google.com/?q=-25.5185448369,-56.6921695425
COV14	1079	1016	935	584	https://maps.google.com/?q=-25.5167674912,-56.6927020772

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV14	1076	1014	932	582	https://maps.google.com/?q=-25.5167450001,-56.6923366667
COV14	1114	1045	965	596	https://maps.google.com/?q=-25.5202616668,-56.69179
COV14	1115	1045	965	594	https://maps.google.com/?q=-25.5219244902,-56.6945050336
COV14	1094	1026	948	583	https://maps.google.com/?q=-25.5233717817,-56.6993814252
COV14	0	0	0	576	https://maps.google.com/?q=-25.5219596952,-56.6997524174
COV14	1071	1003	927	570	https://maps.google.com/?q=-25.5251164066,-56.7053744146
COV14	0	0	0	536	https://maps.google.com/?q=-25.5172241495,-56.7052126538
COV14	0	0	0	506	https://maps.google.com/?q=-25.5102142134,-56.708111259
COV14	0	0	0	497	https://maps.google.com/?q=-25.508226348,-56.7093570547
COV14	0	0	0	484	https://maps.google.com/?q=-25.5032688464,-56.7103567202
COV14	0	0	0	451	https://maps.google.com/?q=-25.4964071973,-56.713357907
COV14	0	0	0	435	https://maps.google.com/?q=-25.4888330882,-56.7130999334
COV14	0	0	0	425	https://maps.google.com/?q=-25.4841025996,-56.7141729847
COV14	0	0	0	418	https://maps.google.com/?q=-25.4836209467,-56.7116963594
COV14	0	0	0	404	https://maps.google.com/?q=-25.4733488818,-56.7162137623
COV14	0	0	0	383	https://maps.google.com/?q=-25.4613625067,-56.715709703
COV14	0	0	0	382	https://maps.google.com/?q=-25.460769407,-56.7156766433
COV14	0	0	0	367	https://maps.google.com/?q=-25.45124328,-56.7164210521
COV14	0	0	0	353	https://maps.google.com/?q=-25.4414528968,-56.7167134865
COV14	0	0	0	335	https://maps.google.com/?q=-25.4278930203,-56.714861312
COV14	0	0	0	334	https://maps.google.com/?q=-25.427288137,-56.7147477977
COV14	0	0	0	334	https://maps.google.com/?q=-25.4271635474,-56.7147557657
COV14	0	0	0	329	https://maps.google.com/?q=-25.4264467221,-56.7104172311
COV14	0	0	0	332	https://maps.google.com/?q=-25.425881012,-56.7142673148
COV14	0	0	0	322	https://maps.google.com/?q=-25.4212852715,-56.715123766
COV14	0	0	0	376	https://maps.google.com/?q=-25.4610259181,-56.71311275
COV14	0	0	0	476	https://maps.google.com/?q=-25.5026198686,-56.7069795485
COV14	1038	973	899	552	https://maps.google.com/?q=-25.5274979911,-56.713251719
COV14	1035	970	897	551	https://maps.google.com/?q=-25.5277089755,-56.7140088171
COV14	975	914	845	519	https://maps.google.com/?q=-25.5222894519,-56.7285209097
COV14	939	881	813	499	https://maps.google.com/?q=-25.5220026383,-56.7405340944
COV14	0	0	0	498	https://maps.google.com/?q=-25.5215317242,-56.740269203
COV14	0	0	0	485	https://maps.google.com/?q=-25.5210917552,-56.7448995431
COV14	0	0	0	479	https://maps.google.com/?q=-25.5228367221,-56.7467175901
COV14	0	0	0	482	https://maps.google.com/?q=-25.5210199166,-56.7456554401
COV14	891	836	771	473	https://maps.google.com/?q=-25.5230516013,-56.7572263684
COV14	891	836	771	473	https://maps.google.com/?q=-25.5231672477,-56.7573724566
COV14	885	831	766	471	https://maps.google.com/?q=-25.5224142815,-56.7586665181
COV14	843	793	730	453	https://maps.google.com/?q=-25.5166597318,-56.768780738
COV14	840	791	728	451	https://maps.google.com/?q=-25.5162477325,-56.7695109929
COV14	828	780	717	446	https://maps.google.com/?q=-25.5144917115,-56.772528149
COV14	0	0	0	439	https://maps.google.com/?q=-25.5181939721,-56.7736252337
COV14	808	762	699	437	https://maps.google.com/?q=-25.5112863145,-56.7780427606
COV14	803	758	695	435	https://maps.google.com/?q=-25.5105181319,-56.7793039232
COV14	797	752	690	432	https://maps.google.com/?q=-25.5095832545,-56.7809608377
COV14	785	742	680	427	https://maps.google.com/?q=-25.5076649536,-56.7842161622
COV14	783	740	678	426	https://maps.google.com/?q=-25.5071365251,-56.7840486203
COV14	781	739	677	426	https://maps.google.com/?q=-25.5068978468,-56.783976669

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV14	781	738	676	426	https://maps.google.com/?q=-25.5068880902,-56.7840338406
COV14	0	0	0	414	https://maps.google.com/?q=-25.5007377312,-56.7812485521
COV14	0	0	0	395	https://maps.google.com/?q=-25.4901249349,-56.77693504
COV14	0	0	0	391	https://maps.google.com/?q=-25.4876582908,-56.7767306876
COV14	785	742	680	427	https://maps.google.com/?q=-25.5076209753,-56.7842907899
COV14	0	0	0	416	https://maps.google.com/?q=-25.5130034325,-56.7870560907
COV14	0	0	0	400	https://maps.google.com/?q=-25.5220363279,-56.7847521803
COV14	771	730	668	421	https://maps.google.com/?q=-25.5050241986,-56.7880287681
COV14	768	727	665	420	https://maps.google.com/?q=-25.5044271488,-56.788911215
COV14	760	720	659	416	https://maps.google.com/?q=-25.5028727086,-56.7911335896
COV14	758	718	657	415	https://maps.google.com/?q=-25.5024387317,-56.7917593933
COV14	754	714	653	413	https://maps.google.com/?q=-25.5016439317,-56.792916692
COV14	754	714	653	413	https://maps.google.com/?q=-25.5015030571,-56.7931206092
COV14	0	0	0	410	https://maps.google.com/?q=-25.5004983029,-56.7939577629
COV14	752	712	651	412	https://maps.google.com/?q=-25.5011627331,-56.7936132273
COV14	751	711	650	412	https://maps.google.com/?q=-25.500935037,-56.7939428138
COV14	748	708	647	410	https://maps.google.com/?q=-25.5002892112,-56.7948805454
COV14	742	703	643	408	https://maps.google.com/?q=-25.4991387996,-56.796550883
COV14	0	0	0	401	https://maps.google.com/?q=-25.501499918,-56.7979336603
COV14	0	0	0	393	https://maps.google.com/?q=-25.504959961,-56.7984798002
COV14	0	0	0	377	https://maps.google.com/?q=-25.5109223041,-56.8011739109
COV14	0	0	0	362	https://maps.google.com/?q=-25.5180247099,-56.8022204761
COV14	0	0	0	346	https://maps.google.com/?q=-25.5241583611,-56.8012248293
COV14	0	0	0	342	https://maps.google.com/?q=-25.5266410262,-56.8015691095
COV14	0	0	0	328	https://maps.google.com/?q=-25.5336249439,-56.8025346651
COV14	0	0	0	327	https://maps.google.com/?q=-25.5351367086,-56.8026758252
COV14	0	0	0	342	https://maps.google.com/?q=-25.5266334629,-56.8016439797
COV14	741	703	642	407	https://maps.google.com/?q=-25.4989715926,-56.7968025396
COV14	734	696	636	404	https://maps.google.com/?q=-25.4974542615,-56.798997855
COV14	733	695	635	404	https://maps.google.com/?q=-25.4972988196,-56.7992223133
COV14	732	695	634	403	https://maps.google.com/?q=-25.4971054264,-56.7995025247
COV14	717	681	621	398	https://maps.google.com/?q=-25.4938248262,-56.7980983162
COV14	689	657	596	387	https://maps.google.com/?q=-25.4871096612,-56.7977655036
COV14	673	643	583	381	https://maps.google.com/?q=-25.4831849349,-56.7975912059
COV14	0	0	0	381	https://maps.google.com/?q=-25.4831223365,-56.7975814572
COV14	0	0	0	371	https://maps.google.com/?q=-25.4766415221,-56.7945091535
COV14	0	0	0	367	https://maps.google.com/?q=-25.4747144382,-56.7928760673
COV14	0	0	0	367	https://maps.google.com/?q=-25.474330008,-56.7924803263
COV14	0	0	0	364	https://maps.google.com/?q=-25.4751400657,-56.791507122
COV14	0	0	0	364	https://maps.google.com/?q=-25.472789591,-56.7908946231
COV14	0	0	0	361	https://maps.google.com/?q=-25.4723736963,-56.7891671012
COV14	0	0	0	355	https://maps.google.com/?q=-25.473850623,-56.7846671255
COV14	0	0	0	355	https://maps.google.com/?q=-25.4740736786,-56.7840002799
COV14	0	0	0	353	https://maps.google.com/?q=-25.4748199222,-56.7842898487
COV14	0	0	0	353	https://maps.google.com/?q=-25.4743951456,-56.7822502292
COV14	0	0	0	345	https://maps.google.com/?q=-25.4791951329,-56.7841495318
COV14	0	0	0	343	https://maps.google.com/?q=-25.4808629334,-56.7849119695
COV14	0	0	0	338	https://maps.google.com/?q=-25.485011697,-56.7851516012

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV14	0	0	0	343	https://maps.google.com/?q=-25.4807704242,-56.7850619737
COV14	0	0	0	345	https://maps.google.com/?q=-25.4686650882,-56.7808009772
COV14	0	0	0	329	https://maps.google.com/?q=-25.455640556,-56.7779164921
COV14	747	707	647	410	https://maps.google.com/?q=-25.5004594567,-56.7950320416
COV14	750	711	650	411	https://maps.google.com/?q=-25.5010399558,-56.7940387029
COV14	0	0	0	414	https://maps.google.com/?q=-25.5022630946,-56.7914879689
COV14	0	0	0	414	https://maps.google.com/?q=-25.502577621,-56.791060757
COV14	0	0	0	403	https://maps.google.com/?q=-25.4998773657,-56.7869283122
COV14	0	0	0	395	https://maps.google.com/?q=-25.4966019267,-56.7863030133
COV14	771	730	668	421	https://maps.google.com/?q=-25.5050266937,-56.7880298303
COV14	771	730	668	421	https://maps.google.com/?q=-25.5050522844,-56.7880407243
COV14	728	693	631	405	https://maps.google.com/?q=-25.5137224617,-56.79115341
COV14	720	686	624	402	https://maps.google.com/?q=-25.5154783724,-56.7913964833
COV14	703	671	609	396	https://maps.google.com/?q=-25.5193695411,-56.7919514288
COV14	700	669	606	395	https://maps.google.com/?q=-25.5193313467,-56.7927493585
COV14	674	646	584	385	https://maps.google.com/?q=-25.5264210727,-56.7929426149
COV14	658	632	569	378	https://maps.google.com/?q=-25.530643537,-56.7935336565
COV14	631	609	547	368	https://maps.google.com/?q=-25.53768826,-56.7946057769
COV14	629	606	544	367	https://maps.google.com/?q=-25.5385028829,-56.7947297606
COV14	0	0	0	357	https://maps.google.com/?q=-25.5393966414,-56.7868045826
COV14	0	0	0	355	https://maps.google.com/?q=-25.5383966936,-56.7866600244
COV14	0	0	0	354	https://maps.google.com/?q=-25.5379895175,-56.7866310865
COV14	0	0	0	330	https://maps.google.com/?q=-25.5398431128,-56.7716665637
COV14	0	0	0	320	https://maps.google.com/?q=-25.5441049645,-56.7670450389
COV14	0	0	0	313	https://maps.google.com/?q=-25.5492943248,-56.769763757
COV14	0	0	0	313	https://maps.google.com/?q=-25.5491218752,-56.7699421507
COV14	0	0	0	311	https://maps.google.com/?q=-25.5512847835,-56.7706613221
COV14	0	0	0	306	https://maps.google.com/?q=-25.5506323009,-56.7763366976
COV14	0	0	0	318	https://maps.google.com/?q=-25.5451153571,-56.7660772613
COV14	0	0	0	309	https://maps.google.com/?q=-25.5524950721,-56.7619023259
COV14	0	0	0	342	https://maps.google.com/?q=-25.5509117853,-56.7883376303
COV14	621	600	538	364	https://maps.google.com/?q=-25.5405357338,-56.7950270902
COV14	617	596	534	362	https://maps.google.com/?q=-25.5418761805,-56.7952207269
COV14	0	0	0	362	https://maps.google.com/?q=-25.541833919,-56.7955266143
COV14	613	592	531	359	https://maps.google.com/?q=-25.5456404054,-56.7957660842
COV14	611	590	529	358	https://maps.google.com/?q=-25.5461750165,-56.7958451935
COV14	606	586	525	356	https://maps.google.com/?q=-25.5477270803,-56.7960755033
COV14	594	575	514	351	https://maps.google.com/?q=-25.5514211752,-56.7966222355
COV14	583	565	505	347	https://maps.google.com/?q=-25.5548952473,-56.797135671
COV14	579	562	502	345	https://maps.google.com/?q=-25.5561653416,-56.7973759991
COV14	577	560	500	344	https://maps.google.com/?q=-25.5568289134,-56.79750163
COV14	556	541	482	336	https://maps.google.com/?q=-25.5638856999,-56.7990075914
COV14	551	537	477	333	https://maps.google.com/?q=-25.5656815284,-56.7993967934
COV14	549	535	476	333	https://maps.google.com/?q=-25.566307768,-56.7995161467
COV14	531	518	459	324	https://maps.google.com/?q=-25.5732200388,-56.801066507
COV14	528	516	458	323	https://maps.google.com/?q=-25.5740253466,-56.8010951043
COV14	512	502	443	316	https://maps.google.com/?q=-25.5793313622,-56.7969211204
COV14	496	487	429	309	https://maps.google.com/?q=-25.5850051148,-56.7924617782

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV14	0	0	0	308	https://maps.google.com/?q=-25.5856631839,-56.7936952538
COV14	493	485	427	308	https://maps.google.com/?q=-25.5858479381,-56.7918094997
COV14	478	470	414	301	https://maps.google.com/?q=-25.5917284757,-56.7871597762
COV14	467	461	405	296	https://maps.google.com/?q=-25.5956688634,-56.7840750179
COV14	463	457	401	294	https://maps.google.com/?q=-25.5969228328,-56.7860329819
COV14	0	0	0	282	https://maps.google.com/?q=-25.5984577806,-56.7967809581
COV14	0	0	0	276	https://maps.google.com/?q=-25.5932004545,-56.801018956
COV14	0	0	0	283	https://maps.google.com/?q=-25.6094913545,-56.7837267518
COV14	0	0	0	282	https://maps.google.com/?q=-25.6101029204,-56.7841912757
COV14	0	0	0	272	https://maps.google.com/?q=-25.6209330393,-56.7902347456
COV14	0	0	0	268	https://maps.google.com/?q=-25.6183882743,-56.7941115009
COV14	0	0	0	268	https://maps.google.com/?q=-25.6185349118,-56.7942278479
COV14	0	0	0	268	https://maps.google.com/?q=-25.6180290793,-56.794658681
COV14	0	0	0	268	https://maps.google.com/?q=-25.6179995263,-56.7946378817
COV14	0	0	0	266	https://maps.google.com/?q=-25.6170351359,-56.7961322166
COV14	0	0	0	262	https://maps.google.com/?q=-25.614018739,-56.8005892108
COV14	0	0	0	262	https://maps.google.com/?q=-25.6135529473,-56.8012768927
COV14	0	0	0	262	https://maps.google.com/?q=-25.6137234246,-56.8013940549
COV14	0	0	0	256	https://maps.google.com/?q=-25.6085978547,-56.8085918237
COV14	0	0	0	249	https://maps.google.com/?q=-25.5995731473,-56.813613901
COV14	0	0	0	248	https://maps.google.com/?q=-25.5995983337,-56.8136628666
COV14	0	0	0	248	https://maps.google.com/?q=-25.5989519363,-56.8140699304
COV14	0	0	0	246	https://maps.google.com/?q=-25.5963728536,-56.8159873416
COV14	0	0	0	243	https://maps.google.com/?q=-25.5972930935,-56.8207266996
COV14	0	0	0	244	https://maps.google.com/?q=-25.5950046568,-56.8138314195
COV14	0	0	0	254	https://maps.google.com/?q=-25.6072088447,-56.8082792499
COV14	0	0	0	266	https://maps.google.com/?q=-25.6170118579,-56.7961115515
COV14	0	0	0	269	https://maps.google.com/?q=-25.6234585681,-56.791903088
COV14	0	0	0	280	https://maps.google.com/?q=-25.6113908158,-56.7802369104
COV14	0	0	0	279	https://maps.google.com/?q=-25.6114232007,-56.7789047464
COV14	0	0	0	278	https://maps.google.com/?q=-25.6135979511,-56.7792388171
COV14	0	0	0	256	https://maps.google.com/?q=-25.6380832229,-56.7665502412
COV14	0	0	0	275	https://maps.google.com/?q=-25.6125012035,-56.7757337941
COV14	0	0	0	331	https://maps.google.com/?q=-25.5660281101,-56.7974395904
COV14	0	0	0	331	https://maps.google.com/?q=-25.5661390954,-56.7974674322
COV14	0	0	0	322	https://maps.google.com/?q=-25.5694475289,-56.7912384005
COV14	0	0	0	322	https://maps.google.com/?q=-25.5700244061,-56.7907836194
COV14	0	0	0	316	https://maps.google.com/?q=-25.5672264812,-56.7864516429
COV14	0	0	0	311	https://maps.google.com/?q=-25.564659867,-56.7819474699
COV14	0	0	0	309	https://maps.google.com/?q=-25.563895121,-56.7805664555
COV14	0	0	0	301	https://maps.google.com/?q=-25.5603063903,-56.7727110325
COV14	0	0	0	303	https://maps.google.com/?q=-25.5586082182,-56.7817499088
COV14	0	0	0	312	https://maps.google.com/?q=-25.5705139064,-56.7838786126
COV14	0	0	0	312	https://maps.google.com/?q=-25.5705020208,-56.7838662566
COV14	0	0	0	312	https://maps.google.com/?q=-25.5705965971,-56.7838138892
COV14	0	0	0	312	https://maps.google.com/?q=-25.570588893,-56.7838016233
COV14	0	0	0	311	https://maps.google.com/?q=-25.5713406677,-56.7832241604
COV14	0	0	0	309	https://maps.google.com/?q=-25.5729993894,-56.7819331351

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV14	0	0	0	301	https://maps.google.com/?q=-25.5790081363,-56.7772297128
COV14	0	0	0	301	https://maps.google.com/?q=-25.5689020933,-56.7752763061
COV14	0	0	0	294	https://maps.google.com/?q=-25.5749625697,-56.7710190755
COV14	0	0	0	299	https://maps.google.com/?q=-25.5676919843,-56.773175073
COV14	0	0	0	313	https://maps.google.com/?q=-25.5768559168,-56.7855221549
COV14	0	0	0	303	https://maps.google.com/?q=-25.5841187251,-56.7797600814
COV14	0	0	0	295	https://maps.google.com/?q=-25.5912147263,-56.7740875162
COV14	0	0	0	290	https://maps.google.com/?q=-25.593255131,-56.7774651547
COV14	0	0	0	288	https://maps.google.com/?q=-25.5853894049,-56.7701480383
COV14	0	0	0	286	https://maps.google.com/?q=-25.5825810028,-56.7690893737
COV14	0	0	0	285	https://maps.google.com/?q=-25.5826576882,-56.768687744
COV14	0	0	0	294	https://maps.google.com/?q=-25.5918698025,-56.7735635165
COV14	0	0	0	288	https://maps.google.com/?q=-25.5977277587,-56.7761938445
COV14	572	555	495	342	https://maps.google.com/?q=-25.5571681724,-56.7955420894
COV14	567	551	491	340	https://maps.google.com/?q=-25.5571608133,-56.7938976289
COV14	0	0	0	340	https://maps.google.com/?q=-25.5570715247,-56.8021480745
COV14	0	0	0	339	https://maps.google.com/?q=-25.5575085271,-56.8028958457
COV14	0	0	0	330	https://maps.google.com/?q=-25.5616198001,-56.8099550862
COV14	0	0	0	319	https://maps.google.com/?q=-25.5554032517,-56.8167393633
COV14	0	0	0	312	https://maps.google.com/?q=-25.5530333744,-56.8193850078
COV14	0	0	0	311	https://maps.google.com/?q=-25.5519071391,-56.8194381602
COV14	0	0	0	330	https://maps.google.com/?q=-25.5616331372,-56.809981495
COV14	0	0	0	323	https://maps.google.com/?q=-25.5650893683,-56.8155792565
COV14	0	0	0	321	https://maps.google.com/?q=-25.5660034793,-56.8170598756
COV14	0	0	0	320	https://maps.google.com/?q=-25.5656495249,-56.817322617
COV14	0	0	0	315	https://maps.google.com/?q=-25.5704107825,-56.8137115331
COV14	0	0	0	310	https://maps.google.com/?q=-25.5740929623,-56.811060254
COV14	0	0	0	301	https://maps.google.com/?q=-25.5821545482,-56.8052815393
COV14	0	0	0	299	https://maps.google.com/?q=-25.583294534,-56.8044591298
COV14	0	0	0	294	https://maps.google.com/?q=-25.587301795,-56.8054857875
COV14	0	0	0	312	https://maps.google.com/?q=-25.5702911474,-56.8243432291
COV14	0	0	0	308	https://maps.google.com/?q=-25.5664186221,-56.8271136435
COV14	0	0	0	304	https://maps.google.com/?q=-25.5745677424,-56.8316656388
COV14	0	0	0	301	https://maps.google.com/?q=-25.5721355987,-56.8334032029
COV14	0	0	0	300	https://maps.google.com/?q=-25.5713579506,-56.832115839
COV14	0	0	0	301	https://maps.google.com/?q=-25.5718483904,-56.8336083836
COV14	0	0	0	300	https://maps.google.com/?q=-25.5710175112,-56.8323649657
COV14	0	0	0	295	https://maps.google.com/?q=-25.5665423435,-56.8373934927
COV14	0	0	0	288	https://maps.google.com/?q=-25.583892883,-56.8478324223
COV14	0	0	0	285	https://maps.google.com/?q=-25.5859891512,-56.8479314473
COV14	0	0	0	286	https://maps.google.com/?q=-25.5852401445,-56.8500334307
COV14	0	0	0	285	https://maps.google.com/?q=-25.5854025313,-56.849918786
COV14	0	0	0	283	https://maps.google.com/?q=-25.5872669079,-56.8526240309
COV14	0	0	0	303	https://maps.google.com/?q=-25.5778059554,-56.8189422469
COV14	0	0	0	327	https://maps.google.com/?q=-25.5639977711,-56.808253065
COV14	0	0	0	323	https://maps.google.com/?q=-25.5668129295,-56.8062209316
COV14	0	0	0	326	https://maps.google.com/?q=-25.5636466772,-56.8082687452
COV14	0	0	0	404	https://maps.google.com/?q=-25.5136385647,-56.7918448482

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV14	793	749	687	431	https://maps.google.com/?q=-25.508983393,-56.7804272612
COV14	798	754	691	433	https://maps.google.com/?q=-25.5097635852,-56.7787250527
COV14	803	758	695	435	https://maps.google.com/?q=-25.5105260854,-56.7775340563
COV14	795	753	688	435	https://maps.google.com/?q=-25.5080817585,-56.768563945
COV14	0	0	0	403	https://maps.google.com/?q=-25.495987775,-56.7562557996
COV14	0	0	0	386	https://maps.google.com/?q=-25.4855926067,-56.7567913223
COV14	0	0	0	363	https://maps.google.com/?q=-25.4767594657,-56.7510769241
COV14	0	0	0	314	https://maps.google.com/?q=-25.4513883067,-56.7565344347
COV14	0	0	0	361	https://maps.google.com/?q=-25.4763576354,-56.7504153034
COV14	0	0	0	551	https://maps.google.com/?q=-25.5276623224,-56.7140262454
COV14	0	0	0	550	https://maps.google.com/?q=-25.5273642668,-56.7141378247
COV14	0	0	0	620	https://maps.google.com/?q=-25.5184050793,-56.6827668892
COV14	0	0	0	619	https://maps.google.com/?q=-25.5183294727,-56.6827685723
COV14	0	0	0	596	https://maps.google.com/?q=-25.5117796699,-56.6830899105
COV14	0	0	0	566	https://maps.google.com/?q=-25.5031694163,-56.6838722463
COV14	0	0	0	536	https://maps.google.com/?q=-25.495135166,-56.6886770672
COV14	0	0	0	533	https://maps.google.com/?q=-25.494160646,-56.6889388668
COV14	0	0	0	503	https://maps.google.com/?q=-25.4842089857,-56.6926896944
COV14	0	0	0	481	https://maps.google.com/?q=-25.4779133313,-56.697150102
COV14	0	0	0	477	https://maps.google.com/?q=-25.4781978199,-56.6985905352
COV14	0	0	0	466	https://maps.google.com/?q=-25.4730667184,-56.7000391487
COV14	0	0	0	438	https://maps.google.com/?q=-25.4618247522,-56.7015982892
COV14	0	0	0	432	https://maps.google.com/?q=-25.4596239618,-56.6998201744
COV14	0	0	0	410	https://maps.google.com/?q=-25.4560448784,-56.6920879654
COV14	0	0	0	378	https://maps.google.com/?q=-25.4525774514,-56.6795728605
COV14	0	0	0	415	https://maps.google.com/?q=-25.4529090026,-56.703072967
COV14	0	0	0	412	https://maps.google.com/?q=-25.4508992483,-56.7028112402
COV14	0	0	0	396	https://maps.google.com/?q=-25.442536969,-56.6999229173
COV14	0	0	0	378	https://maps.google.com/?q=-25.4319260259,-56.6983068499
COV14	0	0	0	365	https://maps.google.com/?q=-25.4238549579,-56.700029787
COV14	0	0	0	363	https://maps.google.com/?q=-25.4240002174,-56.7010501949
COV14	0	0	0	589	https://maps.google.com/?q=-25.5123028949,-56.6850808692
COV14	0	0	0	622	https://maps.google.com/?q=-25.5182826101,-56.6825962449
COV14	0	0	0	507	https://maps.google.com/?q=-25.484209767,-56.6926901964
COV14	0	0	0	470	https://maps.google.com/?q=-25.4730633692,-56.7000403954
COV14	0	0	0	442	https://maps.google.com/?q=-25.4618236471,-56.7016001461
COV14	0	0	0	419	https://maps.google.com/?q=-25.4529045452,-56.7030743325
COV14	0	0	0	415	https://maps.google.com/?q=-25.4508992491,-56.7028106995
COV14	0	0	0	399	https://maps.google.com/?q=-25.4425402022,-56.6999270779
COV14	0	0	0	381	https://maps.google.com/?q=-25.4319260621,-56.6983025339
COV14	0	0	0	367	https://maps.google.com/?q=-25.4238563463,-56.7000330184
COV14	0	0	0	366	https://maps.google.com/?q=-25.4240029003,-56.7010469601
COV14	0	0	0	349	https://maps.google.com/?q=-25.4258804538,-56.7142682727
COV14	0	0	0	348	https://maps.google.com/?q=-25.4257450549,-56.7142984248
COV14	0	0	0	341	https://maps.google.com/?q=-25.4212946391,-56.7151342632
COV14	0	0	0	346	https://maps.google.com/?q=-25.4276154994,-56.7148807384
COV14	0	0	0	328	https://maps.google.com/?q=-25.4414537654,-56.7167179391
COV14	0	0	0	316	https://maps.google.com/?q=-25.4512422205,-56.7164165363

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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COV14	0	0	0	305	https://maps.google.com/?q=-25.4613639978,-56.7157064576
COV14	0	0	0	293	https://maps.google.com/?q=-25.4733483909,-56.7162154931
COV14	0	0	0	278	https://maps.google.com/?q=-25.4888295343,-56.7131047531
COV14	0	0	0	272	https://maps.google.com/?q=-25.4964065453,-56.7133554139
COV14	1213	1140	1050	654	https://maps.google.com/?q=-25.5118848063,-56.6632445826
COV14	1067	1016	924	600	https://maps.google.com/?q=-25.4983523055,-56.6648472696
COV14	1266	1185	1096	675	https://maps.google.com/?q=-25.5125685109,-56.6629183896
COV14	1011	971	875	587	https://maps.google.com/?q=-25.4857170751,-56.6463672785
COV14	0	0	0	1607	https://maps.google.com/?q=-25.4733403716,-56.5301138648
COV14	0	0	0	1606	https://maps.google.com/?q=-25.4733040161,-56.5301253469
COV14	3204	2973	2775	1754	https://maps.google.com/?q=-25.4714052133,-56.5218226257
COV14	3196	2967	2768	1751	https://maps.google.com/?q=-25.471299604,-56.5218365724
COV14	3205	2975	2776	1755	https://maps.google.com/?q=-25.4713980523,-56.5217588878
COV14	2986	2796	2586	1670	https://maps.google.com/?q=-25.4683151495,-56.5217181566
COV14	0	0	0	1917	https://maps.google.com/?q=-25.47079364,-56.5135122078
COV14	0	0	0	1896	https://maps.google.com/?q=-25.4701905027,-56.5133479086
COV14	0	0	0	1874	https://maps.google.com/?q=-25.4700368177,-56.5140325378
COV14	0	0	0	1405	https://maps.google.com/?q=-25.4533029922,-56.5057248597
COV14	0	0	0	2075	https://maps.google.com/?q=-25.469936828,-56.5053645542
COV14	0	0	0	1477	https://maps.google.com/?q=-25.4525186863,-56.4962624047
COV14	0	0	0	2888	https://maps.google.com/?q=-25.4691669948,-56.4847272722
COV14	4509	4229	3905	2779	https://maps.google.com/?q=-25.4663234491,-56.4813740832
COV14	3866	3692	3348	2456	https://maps.google.com/?q=-25.4619431479,-56.4791441976
COV14	3782	3621	3276	2414	https://maps.google.com/?q=-25.4612955089,-56.478827967
COV14	0	0	0	2290	https://maps.google.com/?q=-25.4621098801,-56.4765967389
COV14	0	0	0	2276	https://maps.google.com/?q=-25.4622033471,-56.4763215737
COV14	0	0	0	2275	https://maps.google.com/?q=-25.461847569,-56.476450893
COV14	0	0	0	2273	https://maps.google.com/?q=-25.4618508151,-56.4764189352
COV14	0	0	0	2337	https://maps.google.com/?q=-25.4607181391,-56.4801601282
COV14	0	0	0	2085	https://maps.google.com/?q=-25.4569307144,-56.4752212797
COV14	0	0	0	2032	https://maps.google.com/?q=-25.4573206952,-56.4740183029
COV14	0	0	0	2007	https://maps.google.com/?q=-25.4567496535,-56.4739450994
COV14	0	0	0	1985	https://maps.google.com/?q=-25.4569508821,-56.4734217141
COV14	0	0	0	1982	https://maps.google.com/?q=-25.456515497,-56.4745541011
COV14	0	0	0	2010	https://maps.google.com/?q=-25.457492694,-56.4734694725
COV14	0	0	0	2008	https://maps.google.com/?q=-25.4575074022,-56.4734225399
COV14	0	0	0	1960	https://maps.google.com/?q=-25.4578846015,-56.4722547018
COV14	0	0	0	1856	https://maps.google.com/?q=-25.4568979583,-56.4706083851

ANEXO III CODIGO DE TELEGRAM BOT

```
import pandas as pd
from telegram import InlineKeyboardButton, InlineKeyboardMarkup
from telegram.ext import Updater, CommandHandler, CallbackQueryHandler,
ConversationHandler, MessageHandler, Filters

df = pd.read_csv('RUTA DEL ARCHIVO.csv')

tipos_alimentadores = df['Alimentador'].unique()
datos_usuario = {}

TIPO_ALIMENTADOR, TIPO_FALLA, OBTENER_ENLACES = range(3)

def start(update, context):
    keyboard = []
    for tipo in tipos_alimentadores:
        keyboard.append([InlineKeyboardButton(tipo, callback_data=tipo)])

    reply_markup = InlineKeyboardMarkup(keyboard)
    context.bot.send_message(chat_id=update.effective_chat.id, text="Selecciona el
alimentador:", reply_markup=reply_markup)

    return TIPO_ALIMENTADOR

def button(update, context):
    query = update.callback_query
    chat_id = query.message.chat_id
    alimentador = query.data

    if chat_id in datos_usuario and 'falla' in datos_usuario[chat_id]:
        context.bot.send_message(chat_id=chat_id, text="Por favor, selecciona el tipo de
alimentador antes de elegir el tipo de falla.")
        return ConversationHandler.END

    datos_usuario.pop(chat_id, None)
    datos_usuario[chat_id] = {'alimentador': alimentador}

    df_filtrado = df[df['Alimentador'] == alimentador]
    tipos_fallas = df_filtrado.columns[1:5].tolist()

    keyboard = []
    for tipo in tipos_fallas:
        keyboard.append([InlineKeyboardButton(tipo, callback_data=tipo)])
```

```
reply_markup = InlineKeyboardMarkup(keyboard)
context.bot.send_message(chat_id=chat_id, text="Selecciona el tipo de falla:",
reply_markup=reply_markup)

return TIPO_FALLA

def sub_button(update, context):
    query = update.callback_query
    chat_id = query.message.chat_id
    tipo_falla = query.data

    if tipo_falla not in df.columns:
        context.bot.send_message(chat_id=chat_id, text="El tipo de falla seleccionado no es válido.
Para una nueva consulta pulsa o manda /start")
        return ConversationHandler.END

    datos_usuario[chat_id]['falla'] = tipo_falla

    context.bot.send_message(chat_id=chat_id, text=f"Seleccionaste el tipo de falla '{tipo_falla}'
para el alimentador '{datos_usuario[chat_id]['alimentador']}'.\n\nAhora, por favor, envía el valor
de la falla:")

    return OBTENER_ENLACES

def enviar_enlace(update, context):
    chat_id = update.message.chat_id
    mensaje = update.message.text.strip()

    if chat_id in datos_usuario and datos_usuario[chat_id].get('falla') is not None:
        try:
            valor_falla = int(mensaje)
            alimentador_seleccionado = datos_usuario[chat_id]['alimentador']
            tipo_falla_seleccionado = datos_usuario[chat_id]['falla']

            filtro_alimentador = df['Alimentador'] == alimentador_seleccionado
            filas_filtradas = df[filtro_alimentador]

            valor_minimo = filas_filtradas[tipo_falla_seleccionado].min()
            valor_maximo = filas_filtradas[tipo_falla_seleccionado].max()

            if valor_falla >= valor_minimo and valor_falla <= valor_maximo:
                filtro_falla = df[tipo_falla_seleccionado] == valor_falla
```

```
filas_filtradas = df[filtro_alimentador & filtro_falla]

if not filas_filtradas.empty:
    enlaces_tramos = filas_filtradas['Enlace a maps'].tolist()

    if len(enlaces_tramos) == 1:
        context.bot.send_message(chat_id=chat_id, text=f"Aquí tienes el enlace que
corresponde a tu búsqueda:\n\n{enlaces_tramos[0]}")
    else:
        message = "Aquí tienes los enlaces correspondientes a tu búsqueda:\n\n"
        for enlace_tramo in enlaces_tramos:
            message += f"{enlace_tramo}\n"
        context.bot.send_message(chat_id=chat_id, text=message)

else:
    closest_smaller_value = df.loc[filtro_alimentador & (df[tipo_falla_seleccionado] <=
valor_falla), tipo_falla_seleccionado].max()
    if pd.notnull(closest_smaller_value):
        filtro_falla = df[tipo_falla_seleccionado] == closest_smaller_value
        filas_filtradas = df[filtro_alimentador & filtro_falla]
        enlaces_tramos = filas_filtradas['Enlace a maps'].tolist()

        if len(enlaces_tramos) == 1:
            context.bot.send_message(chat_id=chat_id, text=f"Aquí tienes el enlace que
corresponde a tu búsqueda:\n\n{enlaces_tramos[0]}")
        else:
            message = "Aquí tienes los enlaces correspondientes a tu búsqueda:\n\n"
            for enlace_tramo in enlaces_tramos:
                message += f"{enlace_tramo}\n"
            context.bot.send_message(chat_id=chat_id, text=message)

    else:
        context.bot.send_message(chat_id=chat_id, text="No se encontraron filas que
coincidan con los criterios de selección.")
    else:
        context.bot.send_message(chat_id=chat_id, text=f"El valor ingresado ({valor_falla})
se encuentra fuera del rango ({valor_minimo} - {valor_maximo}).")
        datos_usuario.pop(chat_id)

except ValueError:
    context.bot.send_message(chat_id=chat_id, text="Por favor, ingresa un valor numérico
válido para la falla (números enteros positivos)")
    return
```

```
context.bot.send_message(chat_id=chat_id, text="Para una nueva consulta pulsa o manda /start.")
```

```
return ConversationHandler.END
```

```
def main():
```

```
    updater = Updater(token='TOKEN')
```

```
    dispatcher = updater.dispatcher
```

```
    start_handler = CommandHandler('start', start)
```

```
    button_handler = CallbackQueryHandler(button)
```

```
    sub_button_handler = CallbackQueryHandler(sub_button)
```

```
    message_handler = MessageHandler(Filters.text & (~Filters.command), enviar_enlace)
```

```
    conversation_handler = ConversationHandler(
```

```
        entry_points=[start_handler],
```

```
        states={
```

```
            TIPO_ALIMENTADOR: [button_handler],
```

```
            TIPO_FALLA: [sub_button_handler],
```

```
            OBTENER_ENLACES: [message_handler]
```

```
        },
```

```
        fallbacks=[],
```

```
    )
```

```
    dispatcher.add_handler(conversation_handler)
```

```
    updater.start_polling()
```

```
    updater.idle()
```

```
if __name__ == '__main__':
```

```
    main()
```

ANEXO IV Tabla de Registro de fallas de Alimentadores de la ES-COV

Tabla 1 Novedades de Operación y Eventos de Equipos (ES-COV)

REGISTRO DE FALLAS EN ALIMENTADORES QUE CAUSARON INTERRUPCIONES DEL SERVICIO ELÉCTRICO (duración mayor a 30 minutos).						
Alimentador	2017	2018	2019	2020	2021	TOTAL
COV 1	3	1	5	12	7	28
COV 2	3		8	2	4	17
COV 3	2	1	5	4	2	14
COV 4				1		1
COV 5			2	5	1	8
COV 6	2		6	3	2	13
COV 7	3	1	8	7	3	22
COV 8	4	2	14	11	5	36
COV 9			8	6	2	16

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

Ada Luján Paniagua Giménez - 2023

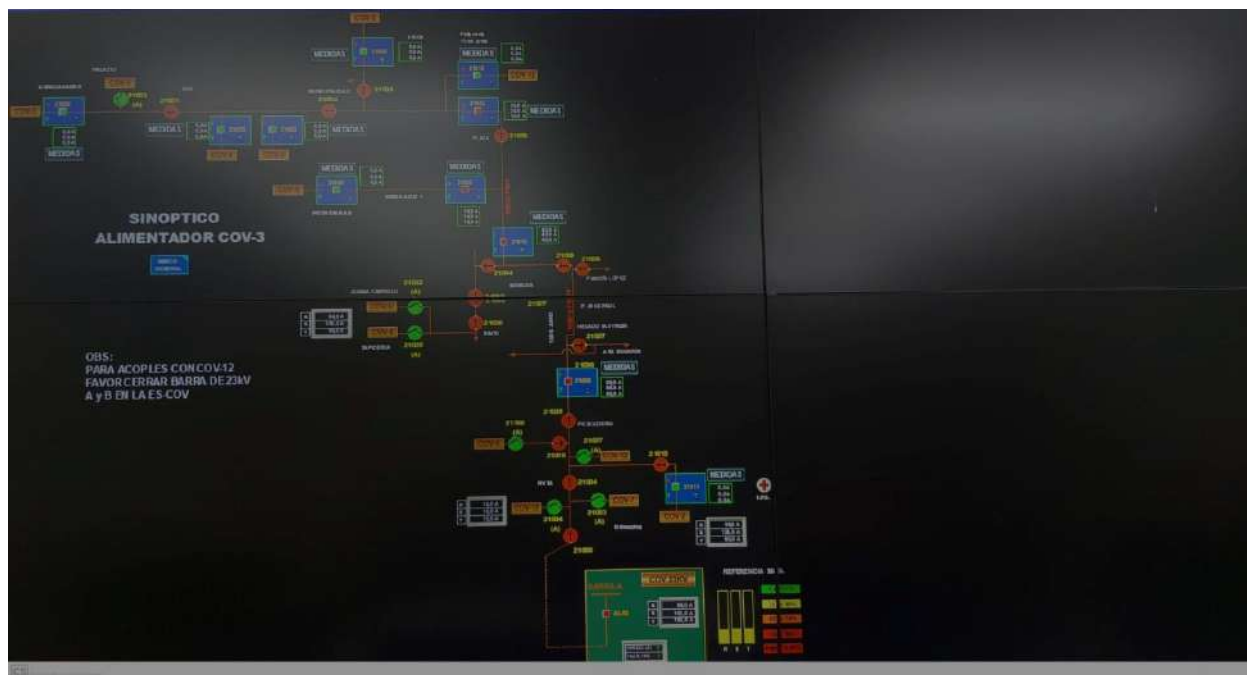


Figura 23 SINOPTICO ALIMENTADOR COV03

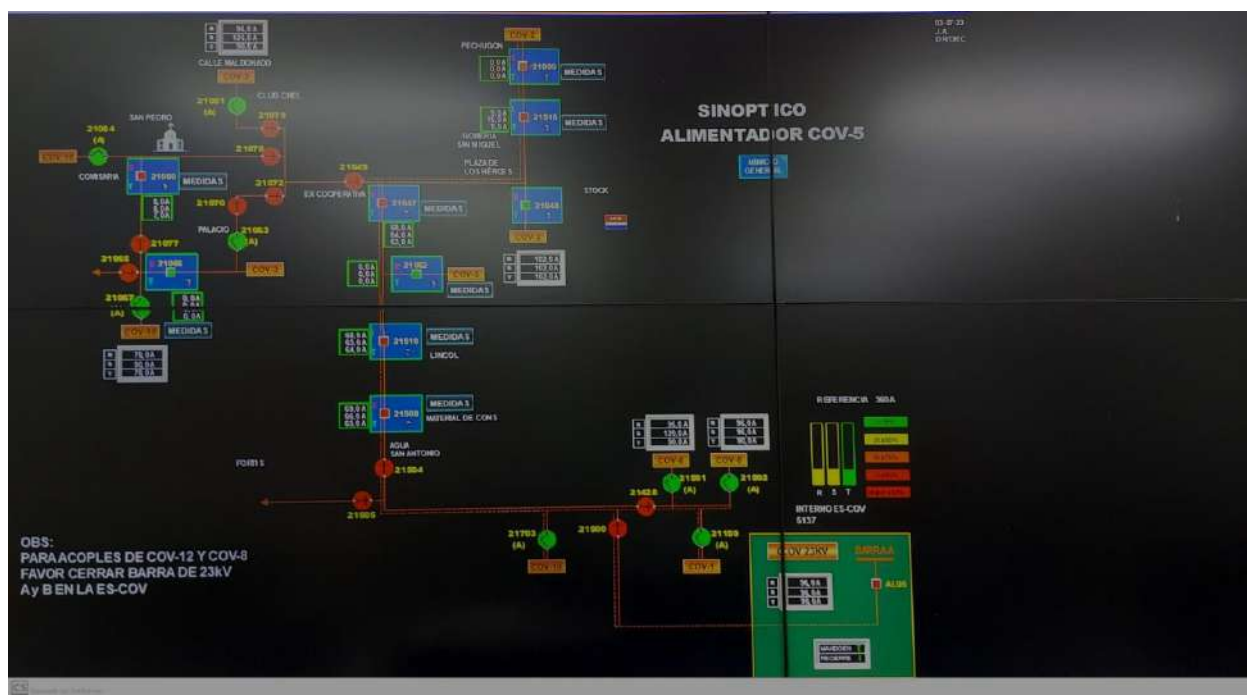


Figura 24 SINOPTICO ALIMENTADOR COV05

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

Ada Luján Paniagua Giménez - 2023

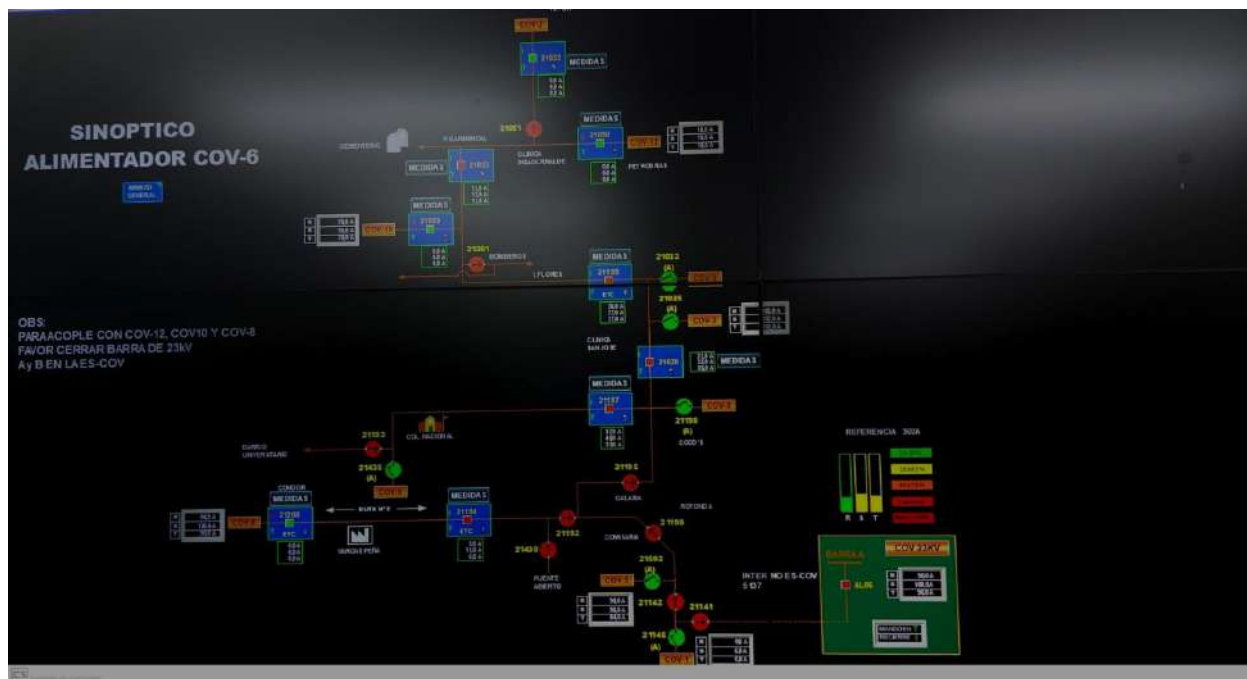


Figura 25 SINOPTICO ALIMENTADOR COV6

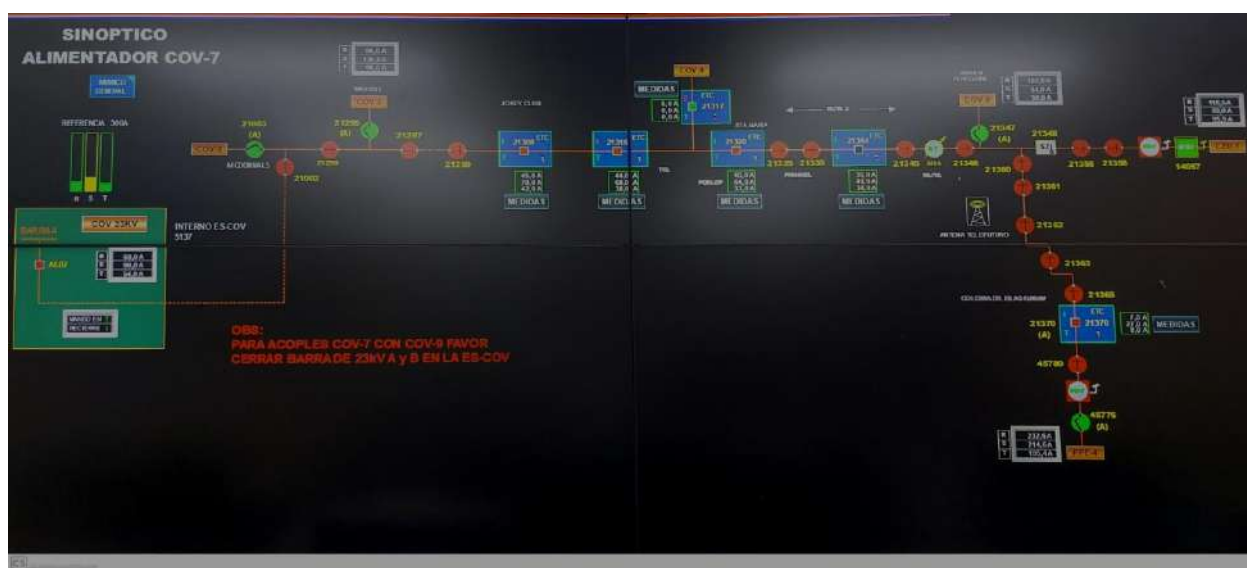


Figura 26 SINOPTICO ALIMENTADOR COV07

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

Ada Luján Paniagua Giménez - 2023

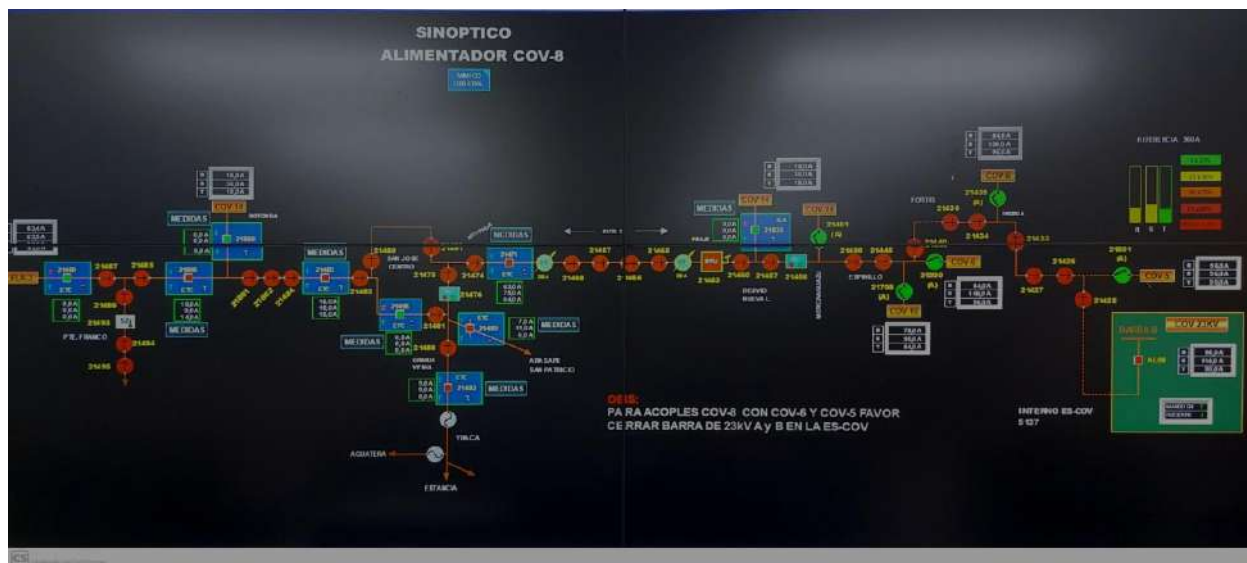


Figura 27 SINOPTICO ALIMENTADOR COV08

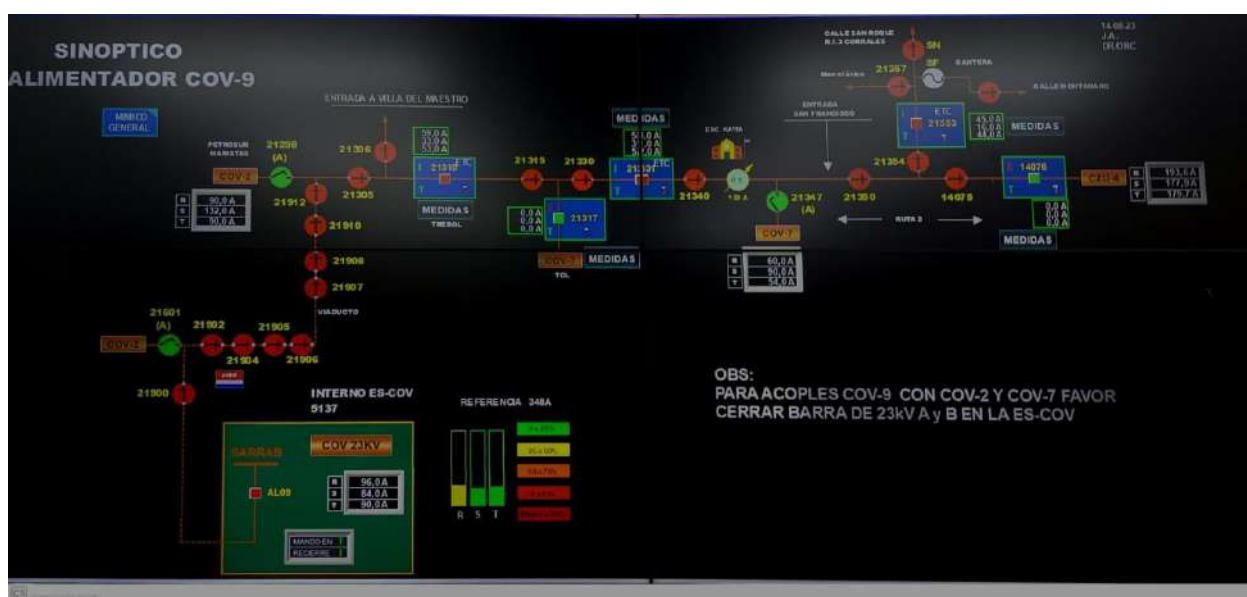


Figura 28 SINOPTICO ALIMENTADOR COV09

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

Ada Luján Paniagua Giménez - 2023

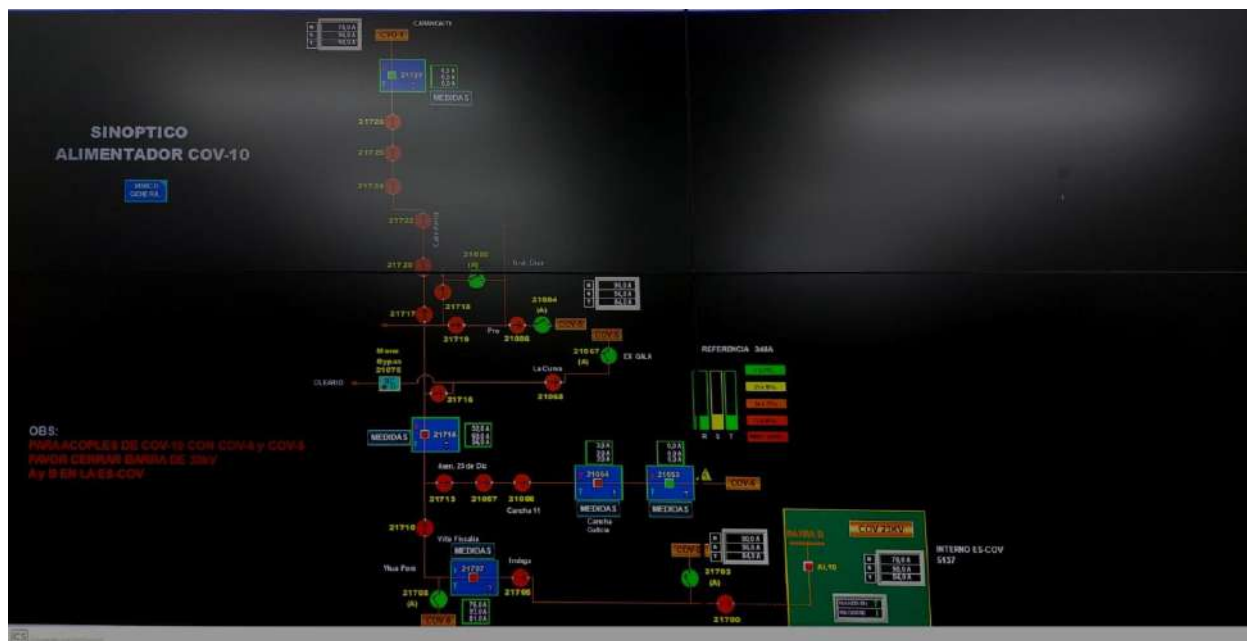


Figura 29 SINOPTICO ALIMENTADOR COV10

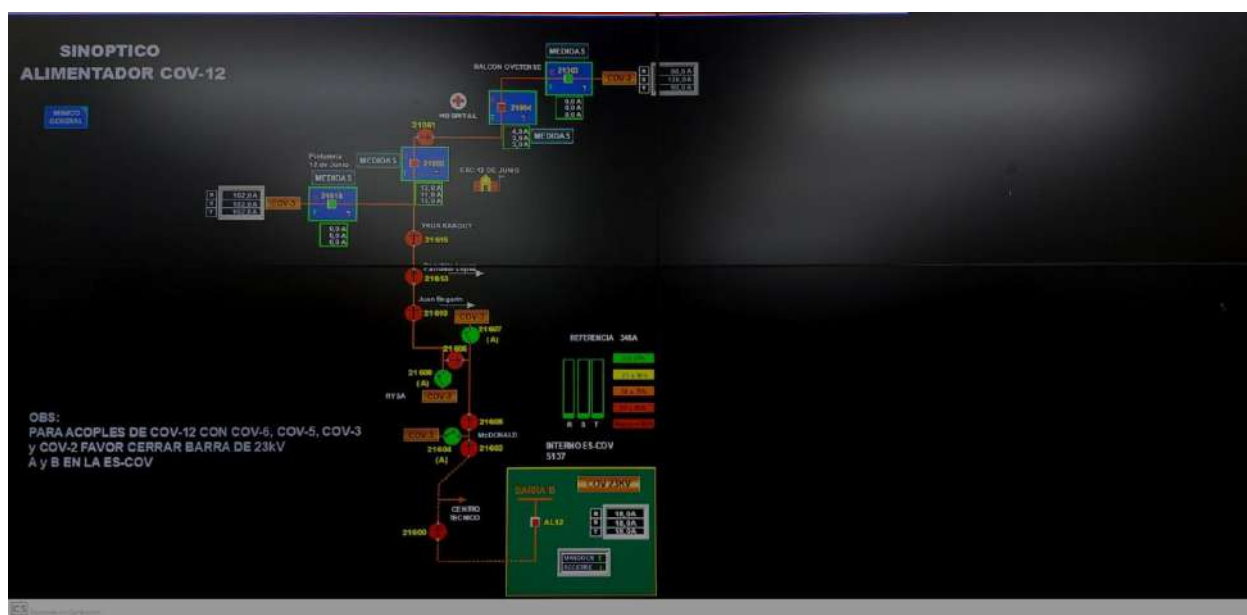


Figura 30 SINOPTICO ALIMENTADOR COV12

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

Ada Luján Paniagua Giménez - 2023

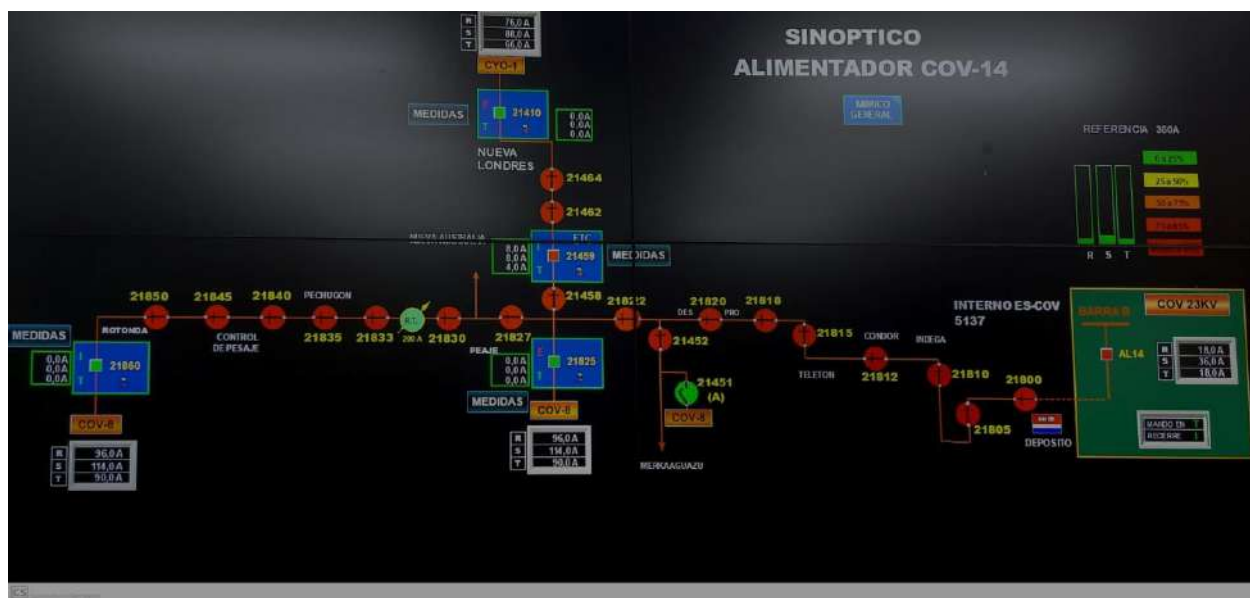


Figura 31 SINOPTICO ALIMENTADOR COV14

ANEXO VI Causa de Fallas 2021

Tabla 2 Fallas 2021 ES-COV

CANTIDAD DE FALLAS EN ALIMENTADORES DE LA ES-COV DEL 2021											
CAUSA DE FALLA	COV01	COV02	COV03	COV05	COV06	COV07	COV08	COV09	COV10	COV12	COV14
RAMA SOBRE LINEA	12	10			4	18					
RECIERRE	14		12	2	2	2	2				
TIEMPO LLUVIOSO	2										
CABLE SUELTO	16		2	6	2	12	7	2	4		
CONDUCTOR EN CONTACTO CON COLUMNA			2								
CRUCETA ROTA		2			10	8		2			
PUENTE SUELTO	8	4	2	3	2	12	24				
SC AVERIADA		2					2				
DESCARGA ATMOSFÉRICA							2	2			
AI SLADOR ROTO								2			
CONDICIONES CLIMATICAS	6	2				2	2	6		2	
DERIVACION EN FORMA DIRECTA	4										

Propuesta de optimización de la función de búsqueda de fallas de equipos telecomandados existentes en líneas de media tensión para disminuir el tiempo de ubicación de fallas de los alimentadores de la ES-COV.

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QUEMA DE BASURA	2										
FUSIBLE AVERIADO			4								
ANIMAL							2				
FALLA FASE TIERRA					5						
FALLA SUBTERRANEO						5					
COLUMNA ROTA							2				