



Meta Alert TM



EGM's Meta Alert™

Es una Herramienta de Optimización y Gestión de la
Red Eléctrica para facilitar la transición a
SmartGrid

winner of cohort 1
 Shell GCxN game changer
power by 
technology for the future grid

SISTEMA EGM

Recolección de Datos



Sensores de Campo y Medición

Transferencia de Datos



Gateway

Análisis de Datos



Motor de IA

Gestión Y Optimización



EQUIPAMIENTO

MSU-1
Transmisión



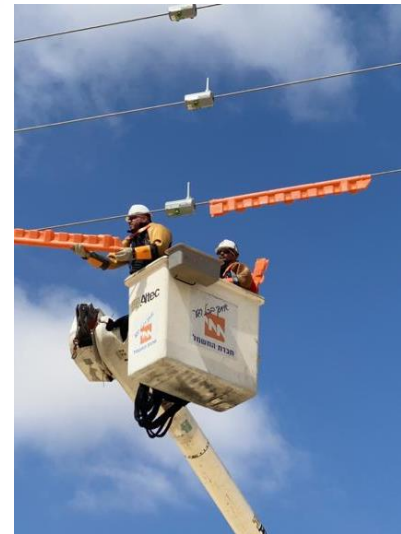
Gateway



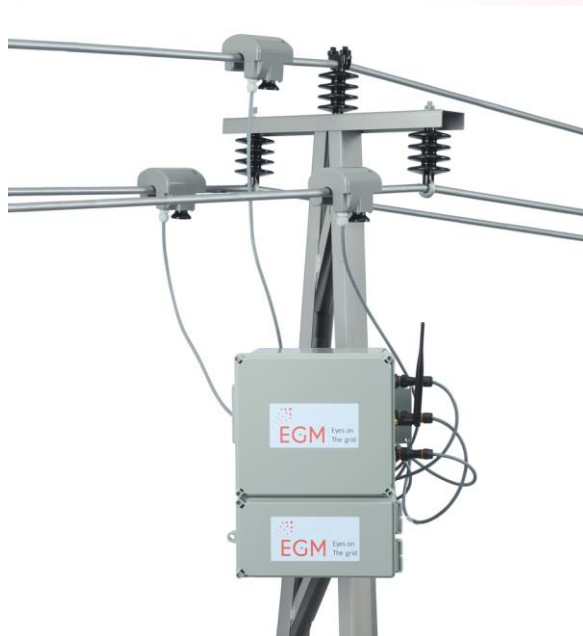
MSU-x-0
Distribución



MONTAJE EN LA RED



MONTAJE EN LA RED DE DISTRIBUCION



MONTAJE EN LA RED DE TRANSMISION



Lista Parcial de parámetros medidos

Eléctrico:

- Voltaje
- Corriente
- Factor Potencia
- Frecuencia
- Energía
- PMU
- Armónicos
- EMF

Infraestructura:

- Movimiento de Cable
- Vibraciones de Cable/torre/postes
- Cable SAG / SWING /Galloping

Ambiental:

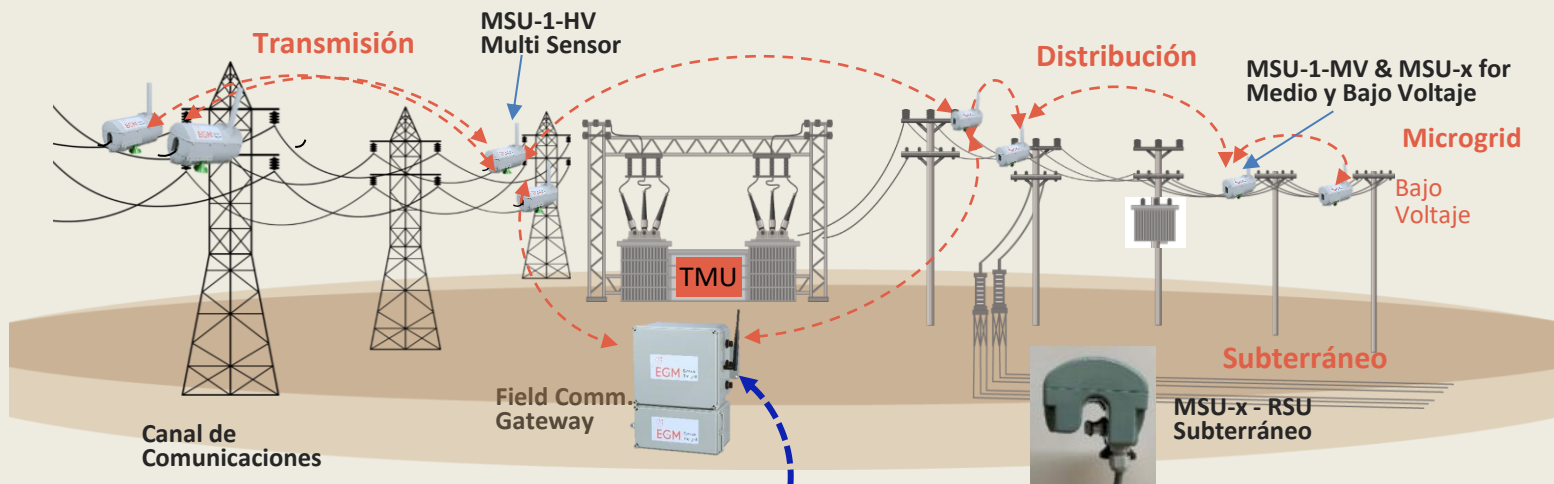
- Temperatura Cable
- Temperatura Ambiente
- Humedad
- Hielo

Otros (futuro):

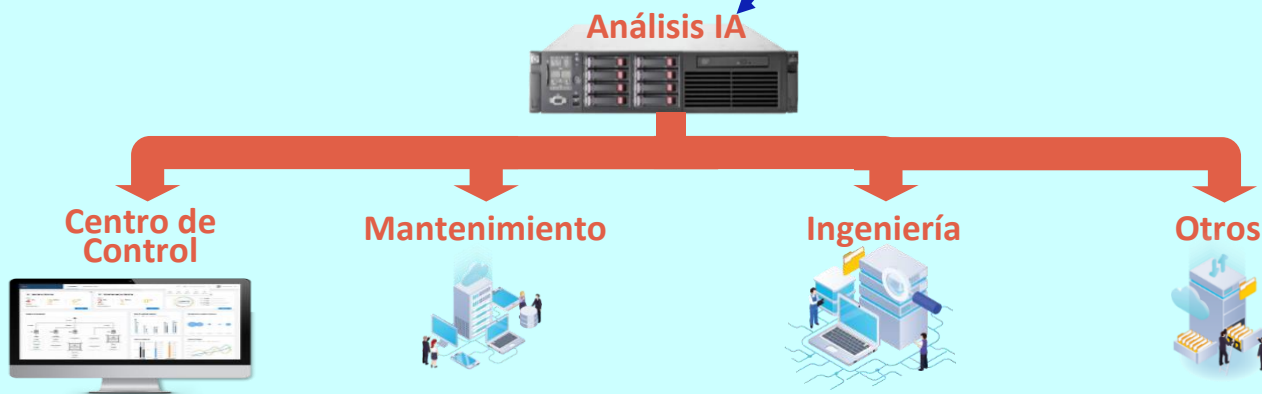
- Imagen de Eventos
- Medición de CO2
- Detección de Humo
- Ruido Audible (Corona)

Arquitectura del Sistema EGM

Terreno

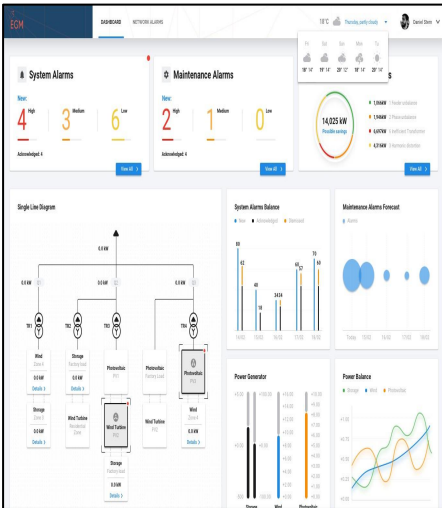


Gestión

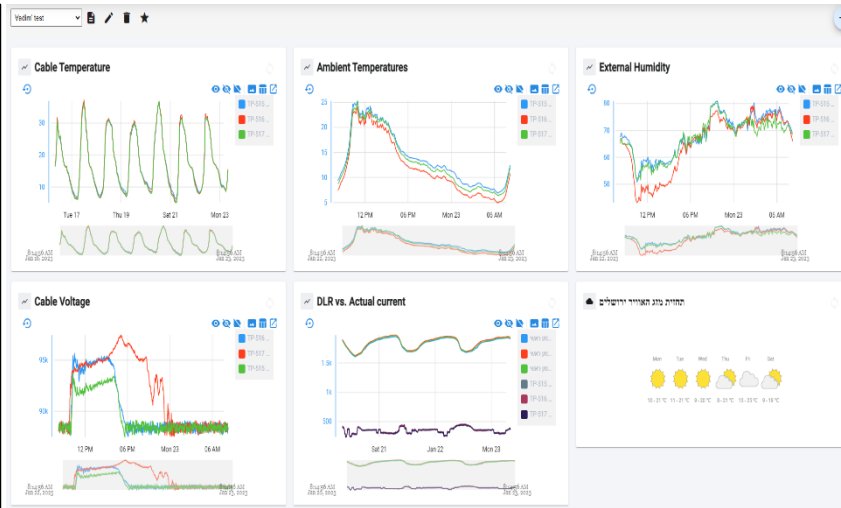


Consolas de Despacho

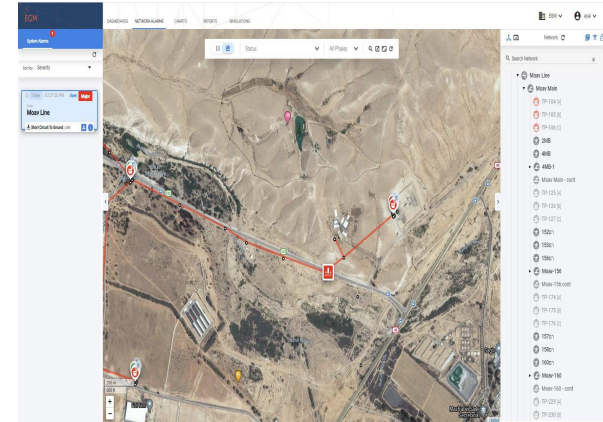
Dashboard General



Dashboard Funcional DLR



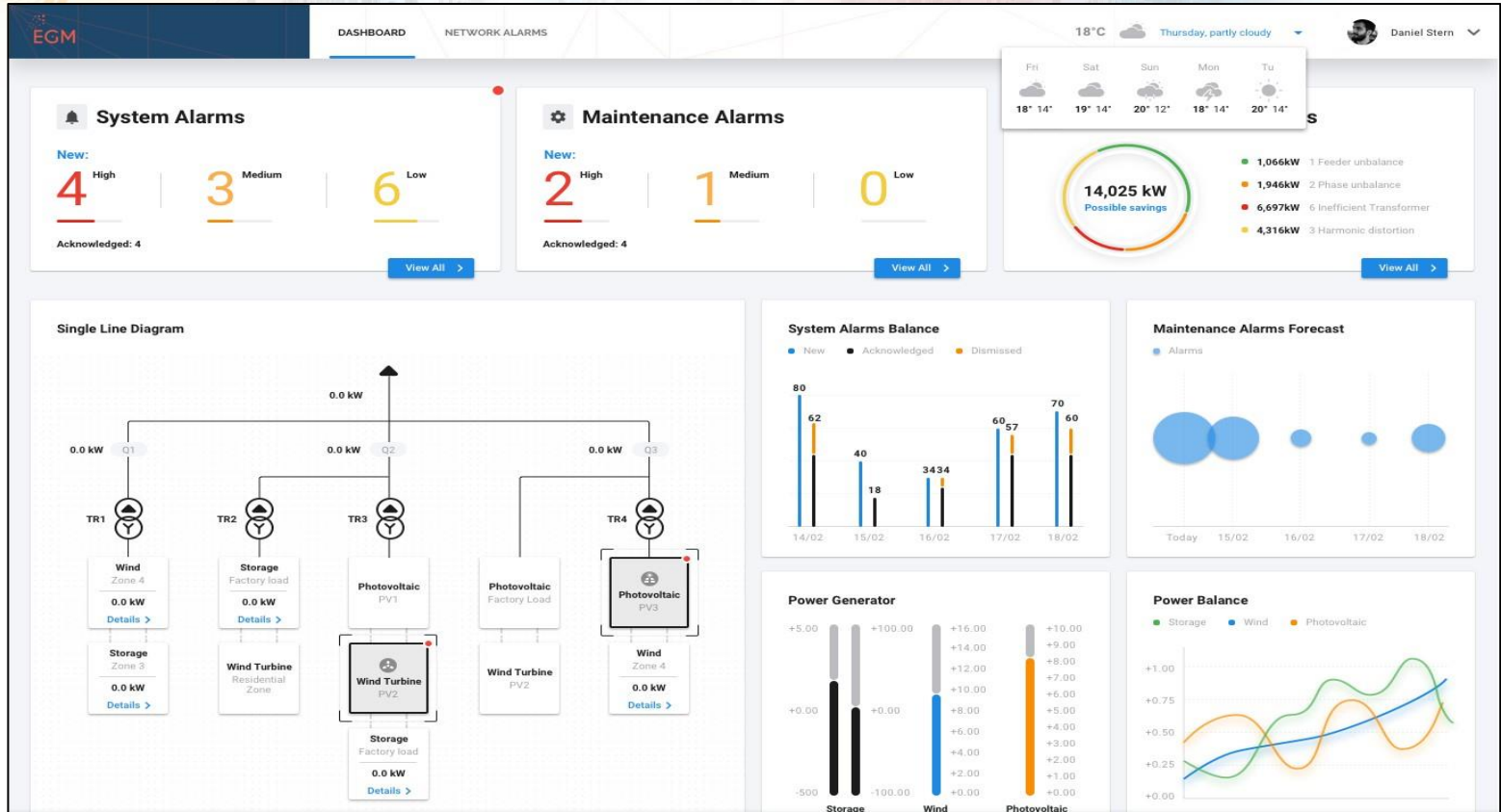
Despliegue Físico



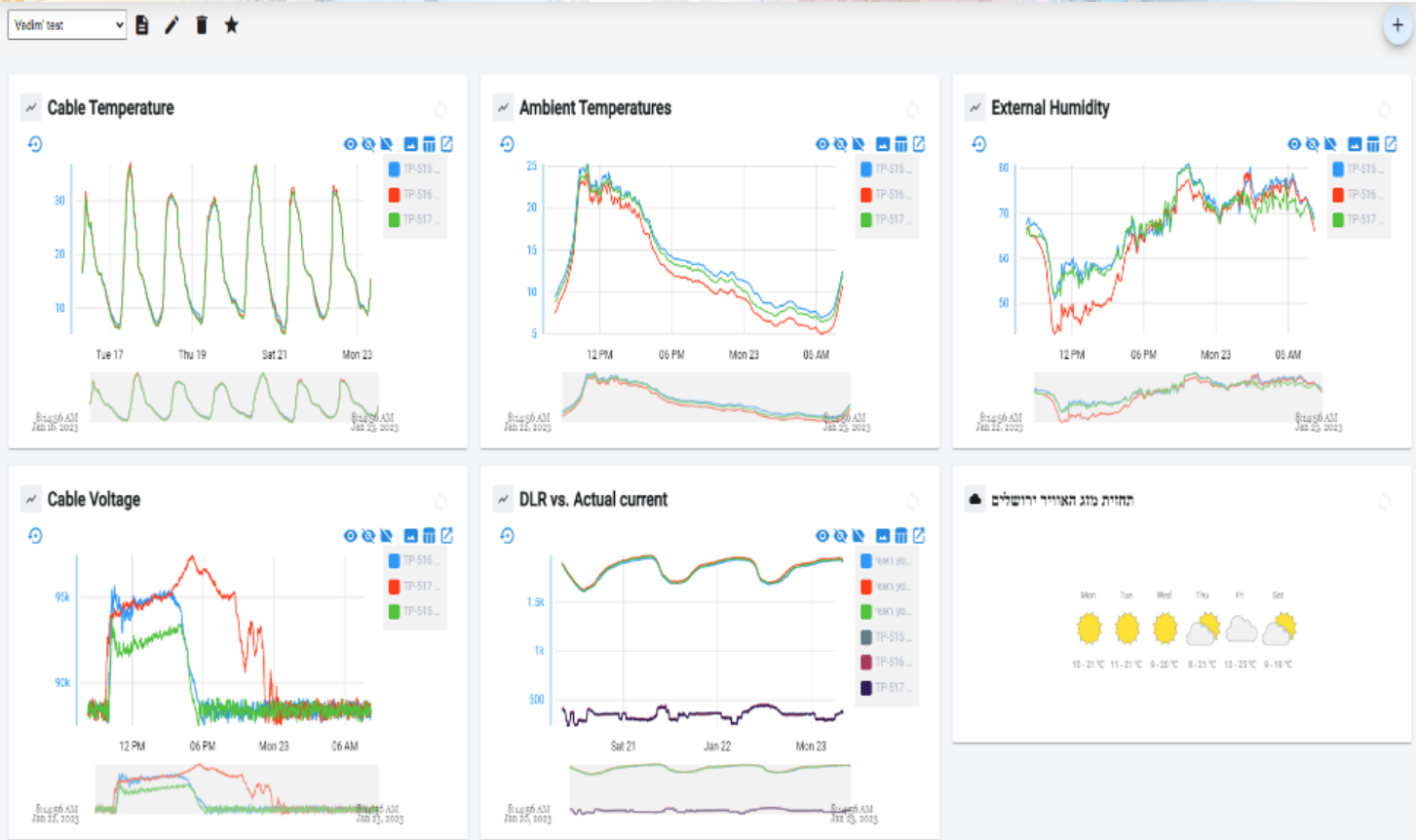
Consolas de Despacho - Físico

The screenshot displays the EGM Eyes On™ dispatch console interface. The main view is an aerial map showing a network of power lines in a desert region. A red line highlights the 'Moav Line', which includes several substations and transmission towers. A red warning icon is visible on the map, indicating a system alarm. The interface includes a top navigation bar with tabs for DASHBOARDS, NETWORK ALARMS, CHARTS, REPORTS, and SIMULATIONS. A left sidebar shows 'System Alarms' with a count of 1 and details for the 'Moav Line' alarm, including the time 'Today | 02:37:20 PM' and severity 'Major'. A right sidebar displays a search network list for 'Moav Line', showing a hierarchy of components such as 'Moav Main', 'Moav-156', and 'Moav-160', each with associated transmission points (TP) and bus numbers.

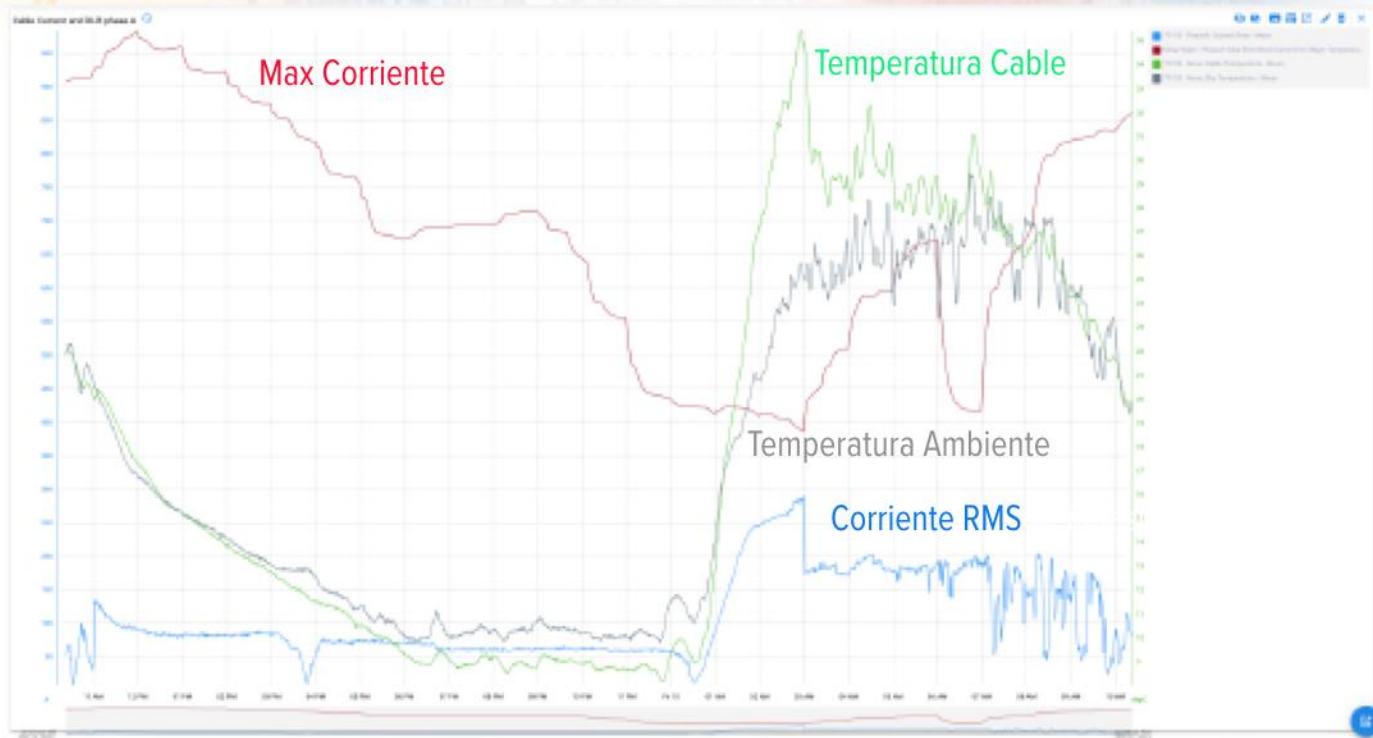
Consolas de Despacho



Consolas de Despacho DLR



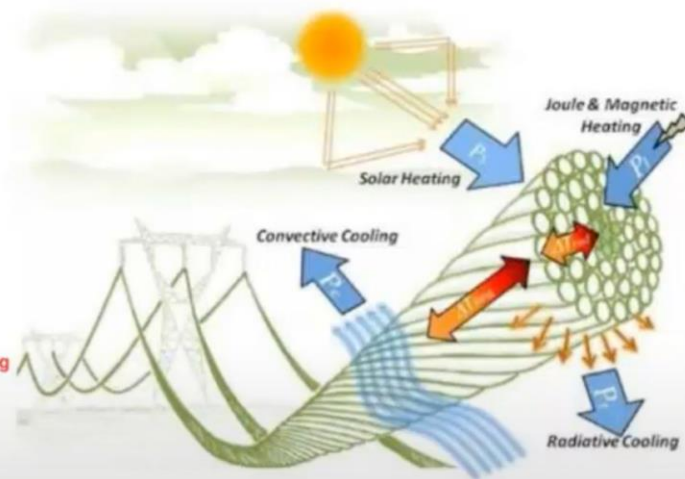
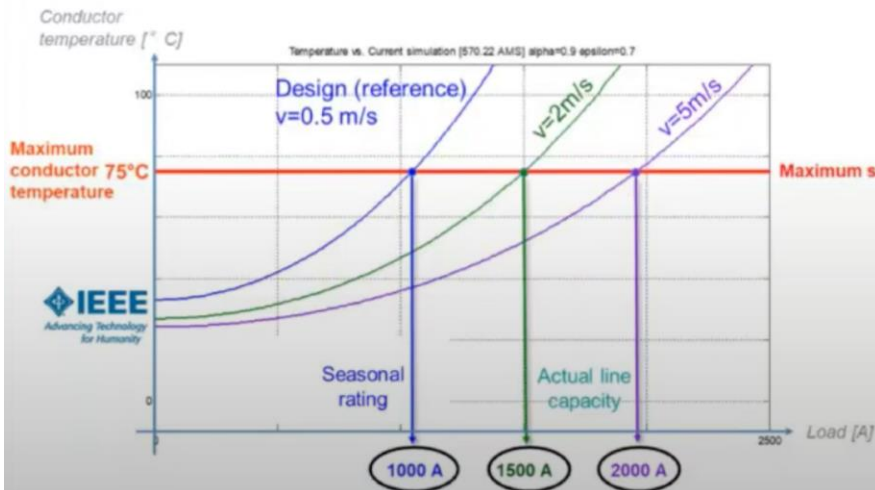
Consolas de Despacho DLR



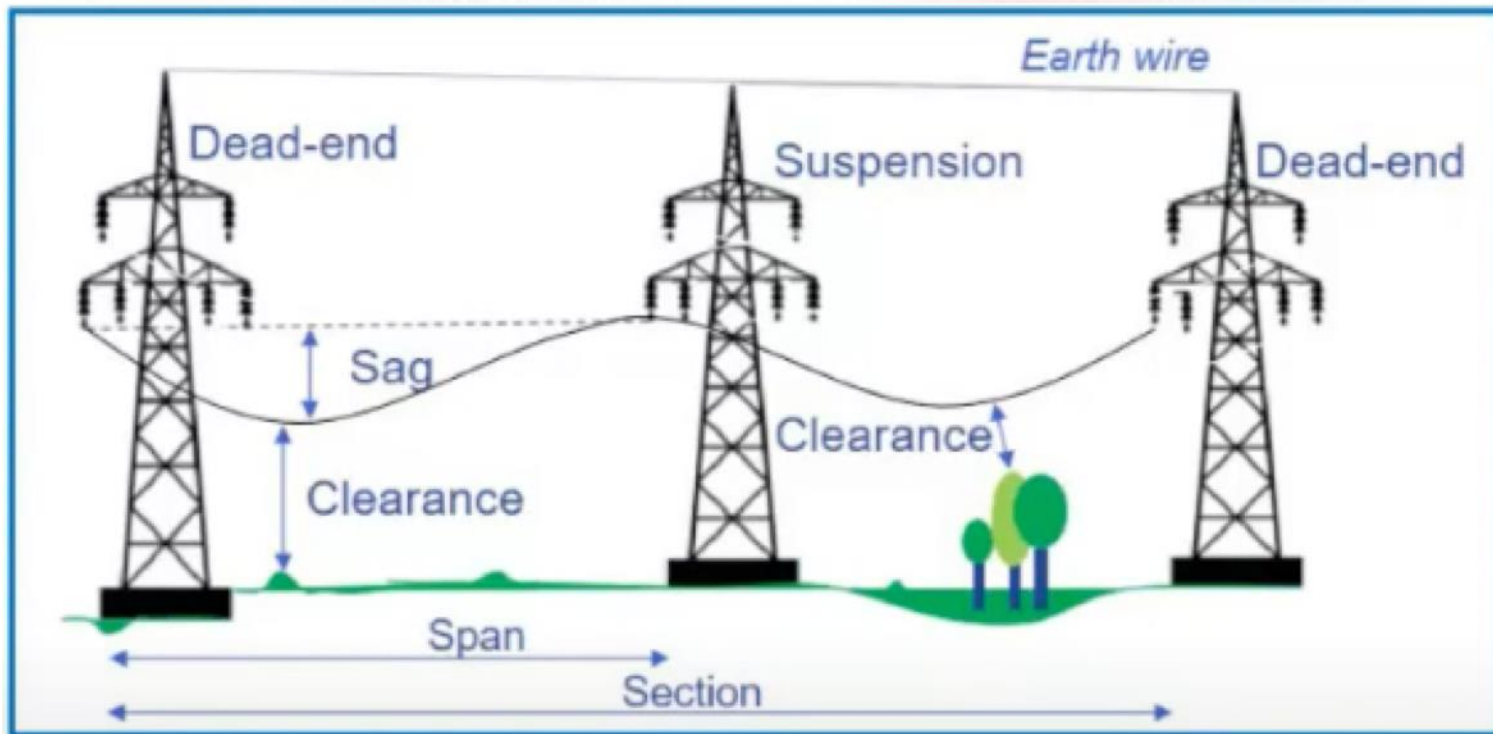
La capacidad de la Línea es sensible al clima

Condiciones ambientales que impactan:

- Velocidad del viento
- Temperatura
- Radiación solar



Medición del SAG



Medición del SAG

Wire Sag Values:

S1 - CIGRE

S2 - Relative to line between poles

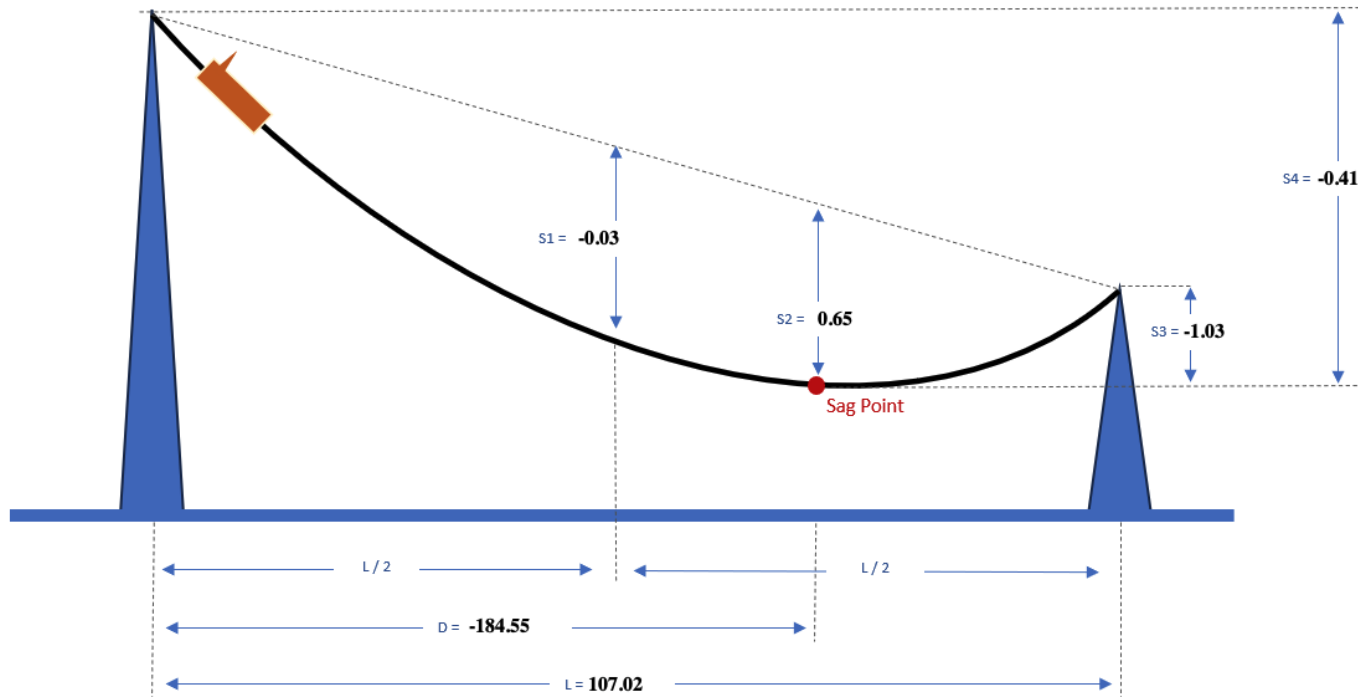
S3 - Relative to lower anchor

S4 - Relative to higher anchor

D - Distance from the sag point to the tower with sensor

L - Distance Between Poles

T - Tension of wire



Load Planning

Current*
1000

Calculate

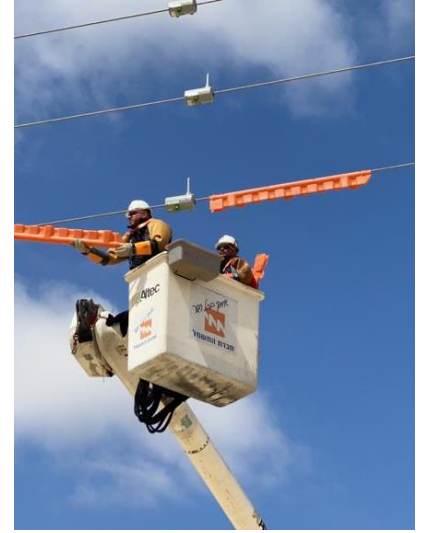
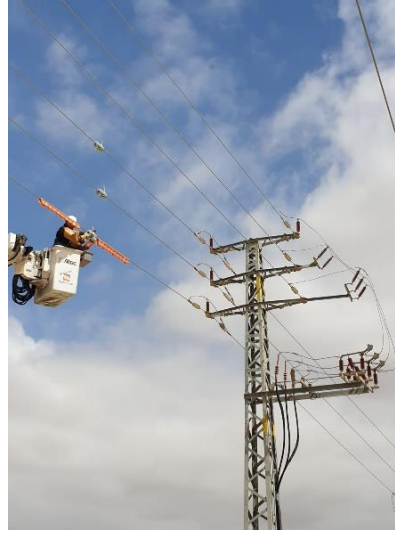
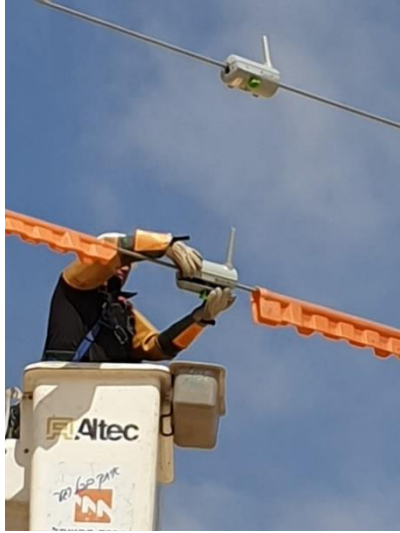
Type in value (**range: 931 - 2400**) for current above and click "Calculate" button to estimate the time till the wire temperature will exceed the allowed limits.

DLR Query Result

	Phase A	Phase B	Phase C
Steady State Wire Temp.	79 (degC)	79 (degC)	79 (degC)
Time to Exceed Temperature threshold	176 (min)	> 3 hours	164 (min)

Beneficios del Sistema

- Optimización de la Red via DLR
- Geo posición de fallas en la Red (AFLD)
- Cable SAG / SWING /Galloping
- Analítica de Datos via IA
- Integración al SCADA
- Comunicaciones seguras



Gracias por su Atención



www.plcpower.com