Paris Session 2022

Development of a DLR solution based on data calibration from weather stations

SC B2 – Pref. subject PS2 – Question 1.15

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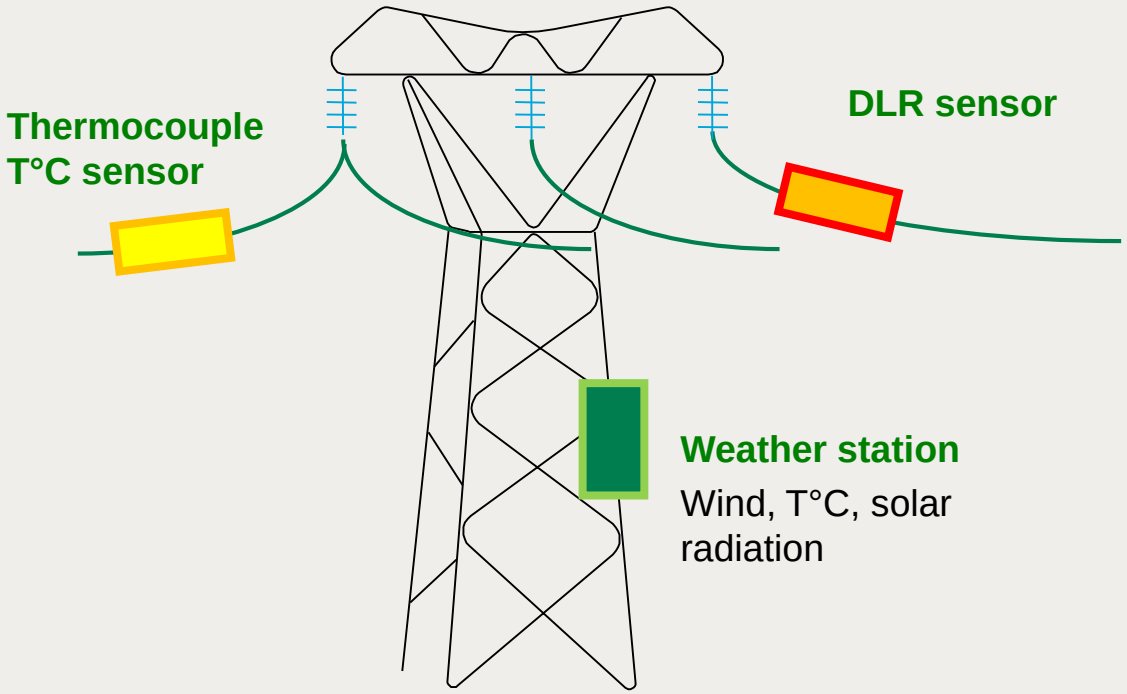
Development of a DLR solution based on weather

RTE has been developing an in-house solution to implement Dynamic Line Rating based on a weather model



Development of "MyDLR" application

Data incoming

- Weather forecast models provided by Météo France
- Weather data acquisition from on-field weather stations (2y)
- Power lines data and material limits

Calibration

- **Enhancing weather forecast from Météo France**

Outputs

Provides to operations and grid studies tools :

- Real ampacity
- Transitory ampacity
- Predictive ampacity

Delivery expected by early 2024

Focus on weather stations

RTE has been deploying on-field weather stations since Dec. 2021, which will be removed after the 2 years data acquisition

20 weather stations have been installed as of today in the zone of Lille (North of France).

These stations include :

- Wind sensors
- Temperature sensors
- Solar radiation sensors

Data transmission by 3G/4G network
IHM **for real-time monitoring** of the stations

Data quality and management

To ensure having the data needed in terms of amount and quality :

1. Stations have been installed every 5km, and others every 1km. It will allow **to compare the data** as the correct spacing between devices is unknown yet.

2. To check if the calibration is efficient enough, the **ampacities calculated from the weather forecast will be compared to values determined by DLR sensors** already installed on these power lines

3. **Topographic survey** to check if the sag and the calculations are compatible