

# tangoc

More efficient management of photovoltaic power plants

**Are you the owner of one or a portfolio of photovoltaic power plants (PV power plant),** and you want to have an easy and effective overview of their operation **remotely and in one place**, which is completely independent of the type and manufacturer of the equipment?

**Tango is the solution** you're looking for.

Tango is a **modern information solution** to ensure cost-effective planning, and efficient control and management of systems in **smart cities**.

**It solves the challenges of modern business**, as it constantly monitors the situation and changes in the physical system, and helps you respond to the current situation with **quick and smart decisions**.





# Key challenges for the successful management of photovoltaic power plants



## LONGEVITY OF INDIVIDUAL PLATFORMS?

Platforms for managing photovoltaic power plants are mostly dependent on the inverter manufacturers. Due to the long life of the photovoltaic power plants, there is a question of longevity.

## RIGIDITY IN SELECTING KEY PERFORMANCE INDICATORS

Platforms typically do not allow display changes based on the specific needs of users – the complexity of the display of technical and commercial indicators vary according to the user type.

## PREDICTIVE ANALYTICS

In most cases, current platforms do not allow predictive analysis of the functioning of the photovoltaic power plants in terms of external phenomena.

With **Tango**, we have solved the key challenges, since we use a platform that is independent from the equipment manufacturers, to establish **a single database and enable integrated control over the operation** of one, or a portfolio of, photovoltaic power stations in near real-time. Tango allows you to select how data and **key performance indicators** are visualised for specific user group. Additionally, **predictive analytics** enables an overview of the functioning of photovoltaic power plants in the future, based on the weather forecast and the solar exposure data. This can also be used to optimise **preventive maintenance**, such as cleaning PV modules.

# With machine learning towards more effective monitoring of photovoltaic power plants

At Petrol, we manage a portfolio of photovoltaic power plants in the public and commercial sectors with a total capacity of 3 MW. Tango has enabled us to monitor the technical parameters and key performance indicators ('Performance ratio', 'Specific yield', changing the 'Maintenance Reserve Account', for better preparedness for future maintenance work) of individual photovoltaic power stations, and more efficient maintenance. This ensures **greater efficiency, reliability, and longevity of the operation of our photovoltaic power stations**.

## KEY ADVANTAGES OF TANGO

- Tango can **predict the production of electricity** based on the input data from irradiation (from own or public meteorological stations) and internationally recognised methods for the production forecast, such as P50 analysis of the production of electricity
- Together with other KPIs, such as 'Performance Ratio' and 'Specific Yield', Tango creates a precise analysis of the operation of the PV power plant throughout any time period, and **enables appropriate alarms** for all kinds of deviations
- Tango can analyse the production of electricity and amount of precipitation in a given location, and allows for the forecast of the needs of cleaning photovoltaic modules, allowing for **more effective preventive maintenance** throughout the life of the PV power plant
- **Key performance indicators** and reporting system are shown in a user-friendly and understandable way
- Accurate technical analysis of the key performance parameters is enabled through the **operations archive data**
- Tango facilitates **connection with other systems** ('ERP', 'SolarEdge')