TIME OF USE AND WEATHER OPTIMIZE FUNCTIONS FOR 18kPV

1. TIME OF USE FUNCTION

1. **Real-time Price Data Integration:** The inverter establishes a real-time connection with the grid company's backend to fetch live updates on the current electricity prices.
2. **Maximize Economic Benefits:** The primary goal of this functionis is to, without compromising the normal operation of the system, maximize cost savings by flexibly adjusting the battery's usage pattern.
3. **User Customization:** Users can customize settings through the inverter monitioring software based on individual needs and fluctuations in electricity prices. This customization enables meeting energy demands and supplies during different time periods.
4. **Real-time Monitoring and Reports:** Users can access real-time system status through the monitoring software. The system also provides detailed reports, helping users better understand system performance and economic benefits.

1.1 OPERATING STEPS USING EG4 MONITIORING

1. **Complete Inverter Information:** Users need to input necessary information about the inverter, such as the serial number, county, and postal code, into the monitoring system. The cloud platform automatically fetches daily electricity price data and analyzes it.
2. **Data Transmission to Inverter:** User settings are transmitted from the cloud platform to the inverter, ensuring the inverter understands the user's charging preferences and price strategies.
3. **Inverter Feedback on Settings:** The inverter provides feedback to the cloud platform, confirming the receipt of settings and executing charge/discharge operations according to user-specified strategies.

2. WEATHER OPTIMIZE FUNCTION

Our system introduces an advanced weather optimization function by fetching real-time weather data from Google. The system offers multiple operating modes to adapt to various scenarios:

- **Charge Priority Mode:** Suitable for areas with unstable power supply, prioritizing battery charging to ensure stable electricity usage.
- **Self-use Mode:** Designed for regions with higher electricity prices, the system prioritizes using self-generated solar power to meet household electricity demands.
- **Forced Charge/Discharge Mode:** Applicable in time-of-use pricing areas, the system enforces charging or discharging based on electricity pricing.

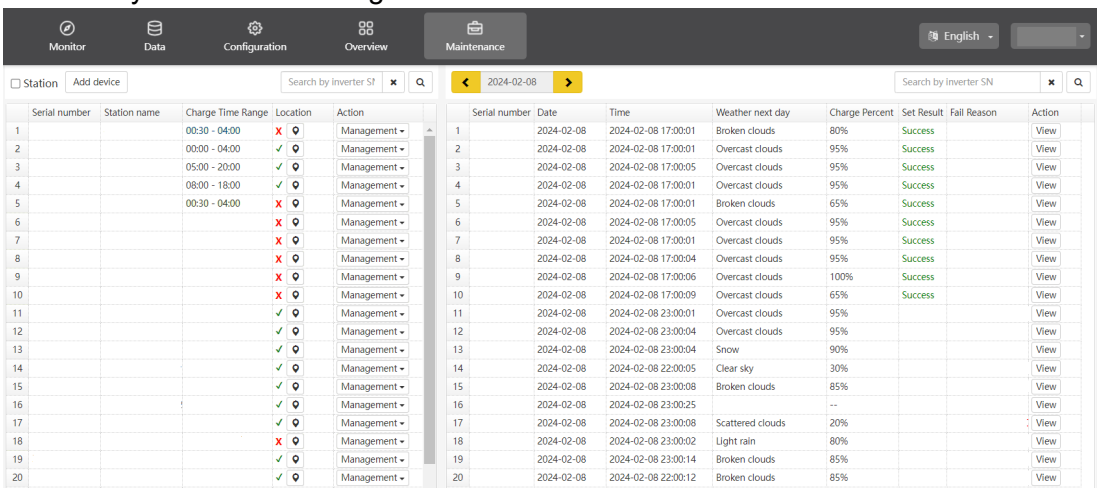
However, due to the diversity of customer scenarios, one mode often can't fulfill all requirements. Therefore, we introduce the Weather Optimize Function to enhance the system's intelligence.

2.1 WEATHER OPTIMIZE FUNCTIONALITY:

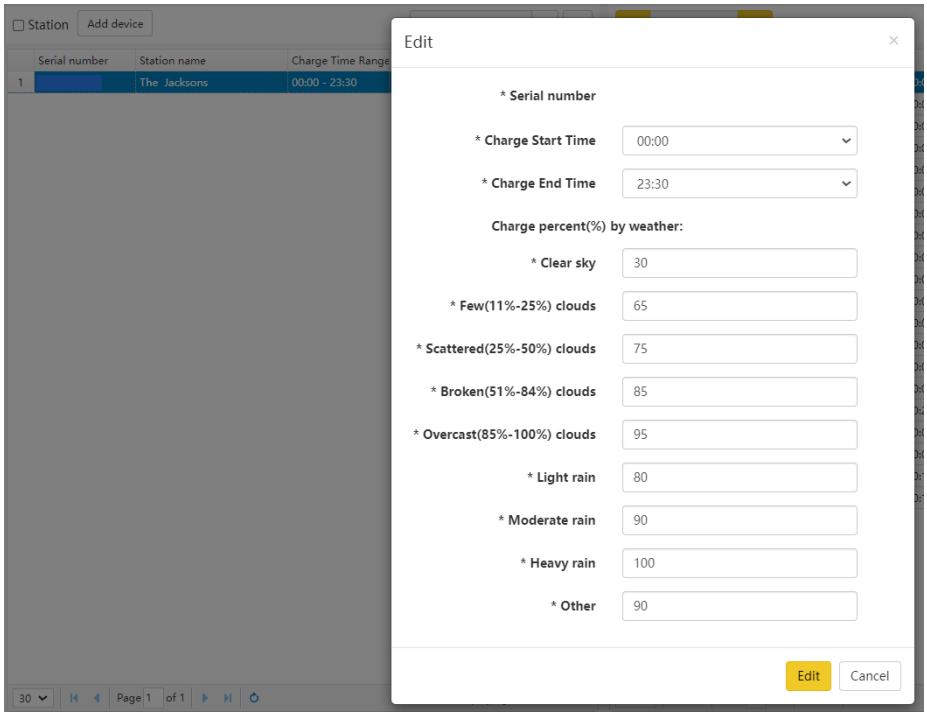
1. **Intelligent Charging Control:** Based on real-time weather information, the system automatically adjusts the charging percentage to maximize solar energy utilization efficiency.
2. **Stable Electricity Usage:** While ensuring stable electricity consumption, the system optimizes charging strategies based on the weather's conditions, ensuring the battery remains adequately charged.

2.2 OPERATING STEPS USING EG4 MONITIORING

1. **Address Input:** Users input the device's location into the system, and the cloud platform automatically fetches and categorizes local weather information.



2. **Time and Percentage Settings:** Users set charging times and percentages based on their electricity usage patterns and different weather conditions.



3. **Data Transmission:** The cloud platform sends user settings to the inverter.

4. **Feedback and Execution:** The inverter provides feedback to the cloud platform, confirming the receipt of settings and executing charging operations according to user-defined parameters.