

Lion Solar Solutions PV*SOL Planing Service New Quality Metrics and Standards

January 2026



Why we are doing it?

Our aim was always providing the quality with technology in time. Beginning of 2026, we decided to increase quality standards and put an enormous goal for ourselves."Providing Most Quality PV*SOL Plannings in the World"

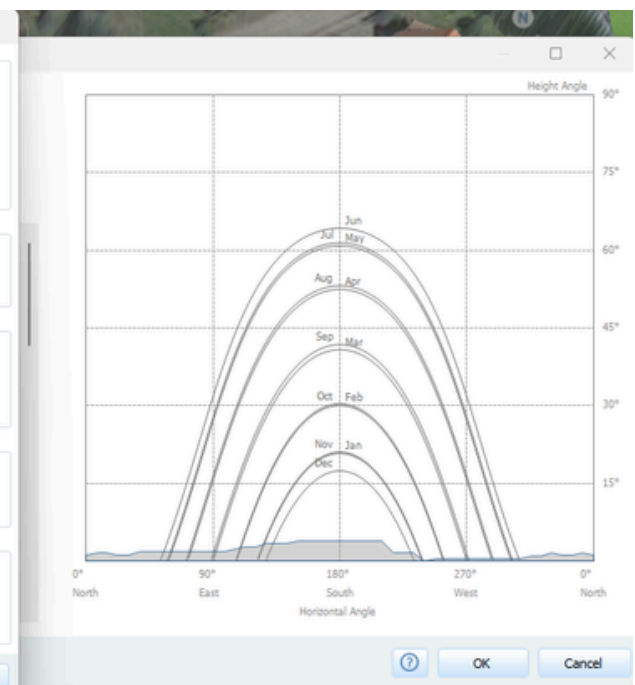
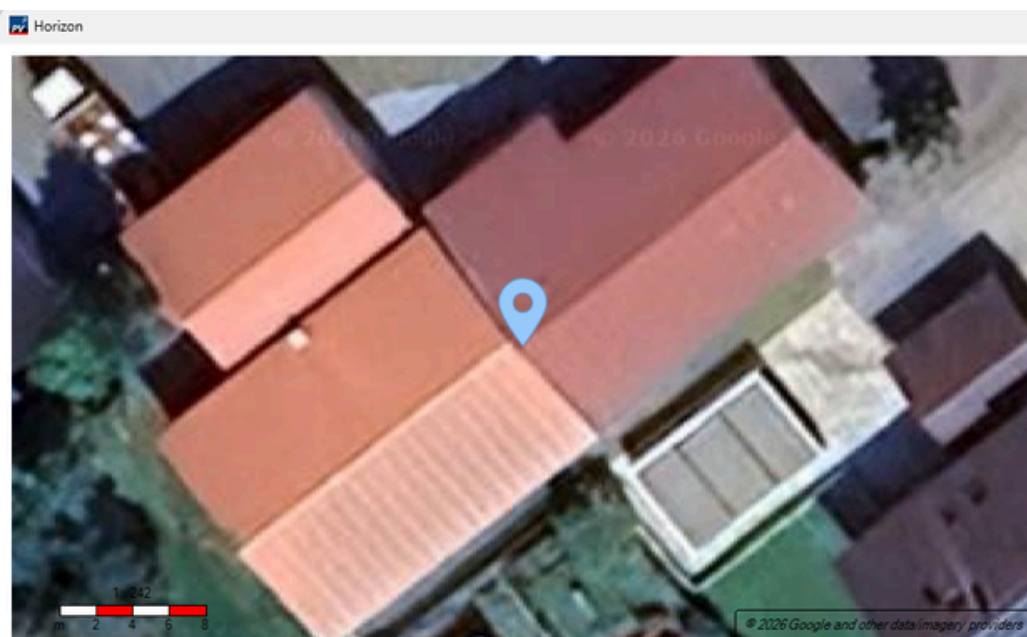
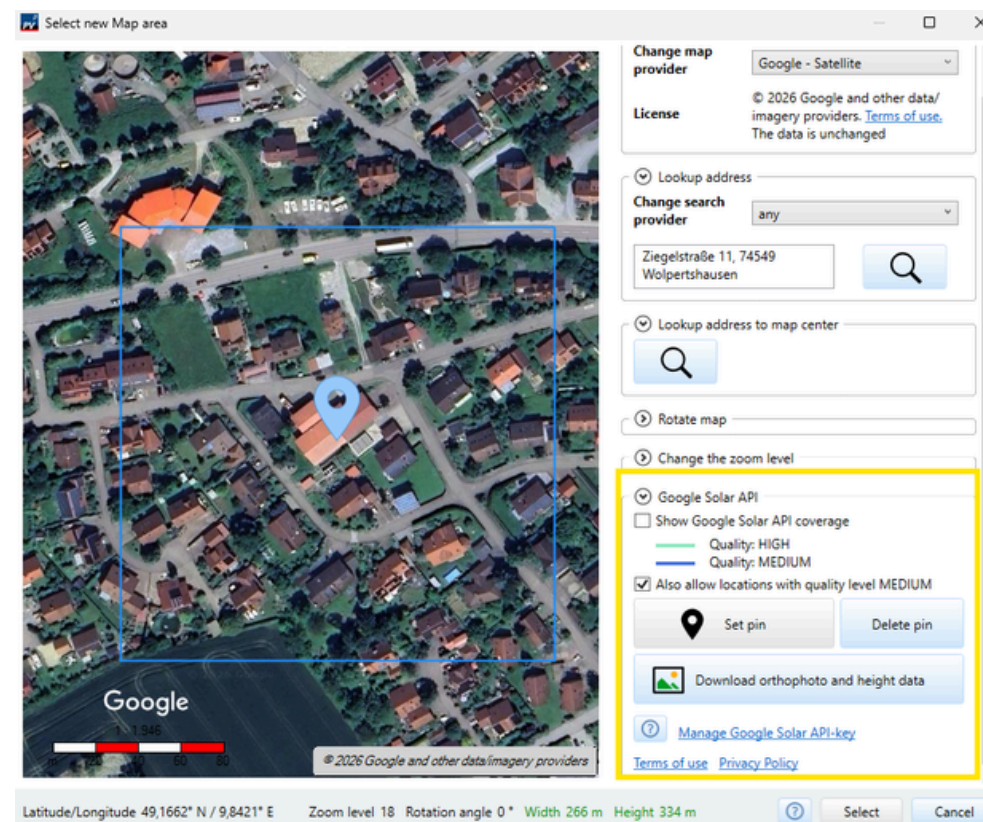
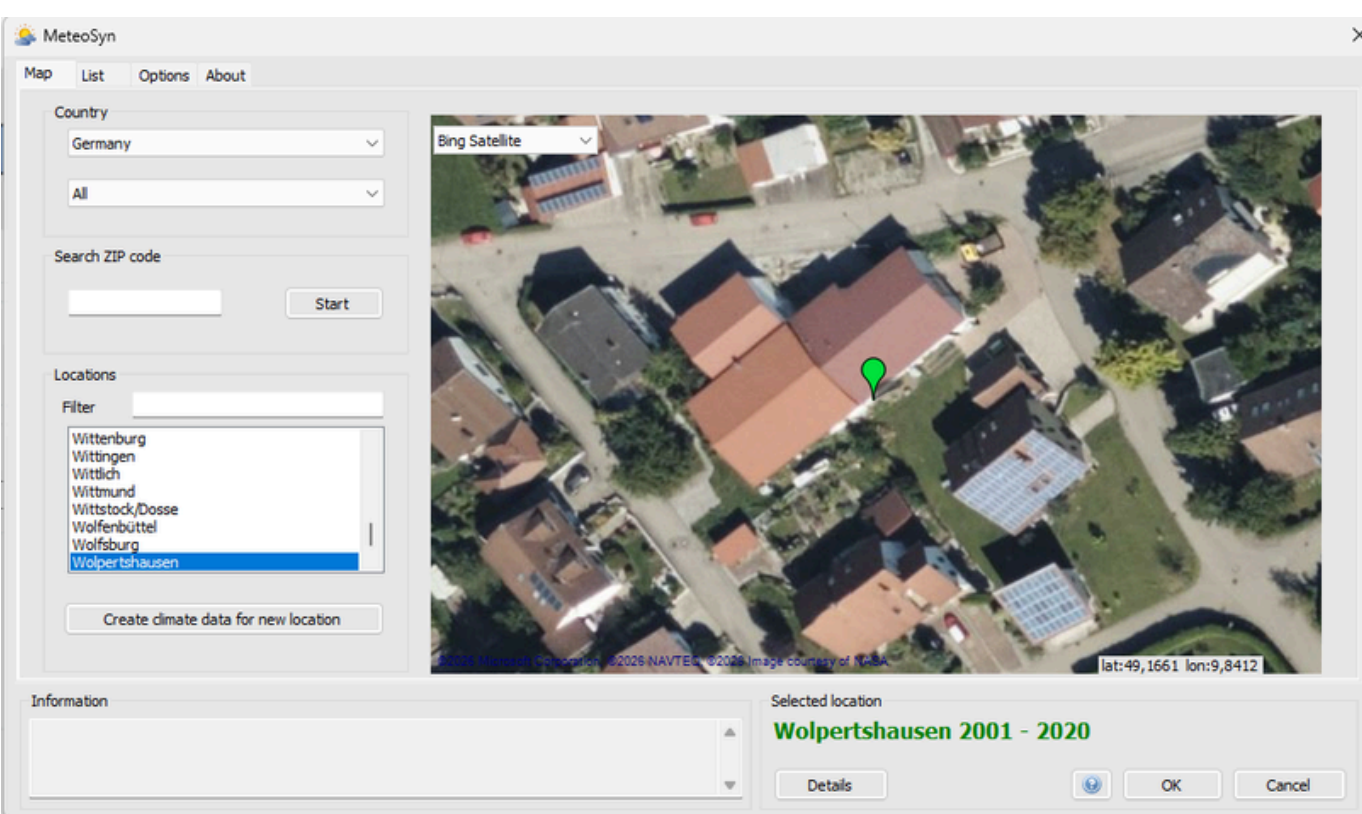
In this document, you can read what we are changing and what will be their effect in the projects.



What will be changed?

1. Site Data & SolarAPI Integration

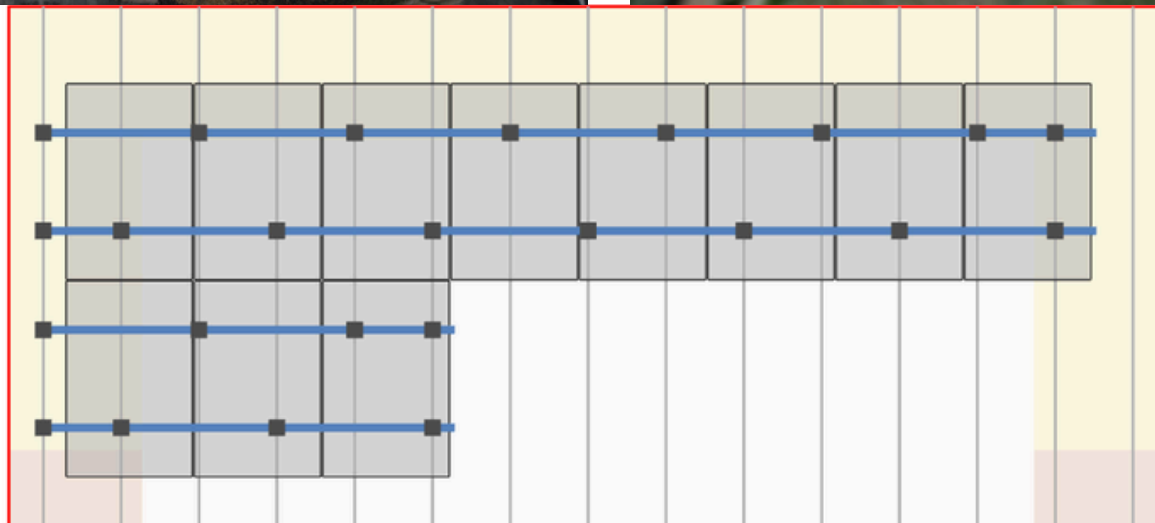
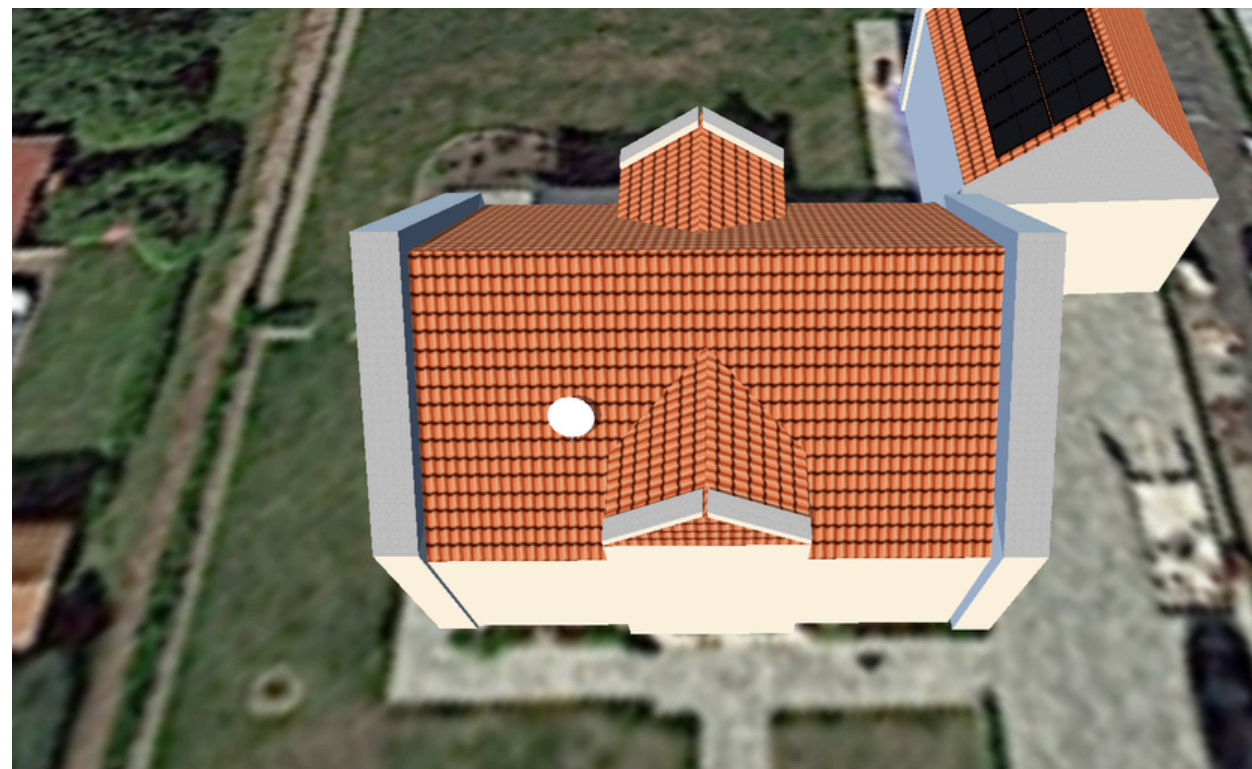
- Geolocation: Pins for both Climate Data and Horizon Data must be placed precisely on the building structure.
- SolarAPI Utilization: SolarAPI must be used whenever available to ensure precise building alignment and matching.
 - High-Quality Data: Use directly for 3D objects and roof geometry.
 - Medium-Quality Data: Objects must be modeled and verified using site photos, drone shots, or Street View.
- Building Height: Height standards must be strictly followed. Use SolarAPI data when available; otherwise, determine height by manually counting floors and multiplying by regional standard floor heights.



What will be changed?

2. Design & Technical Accuracy

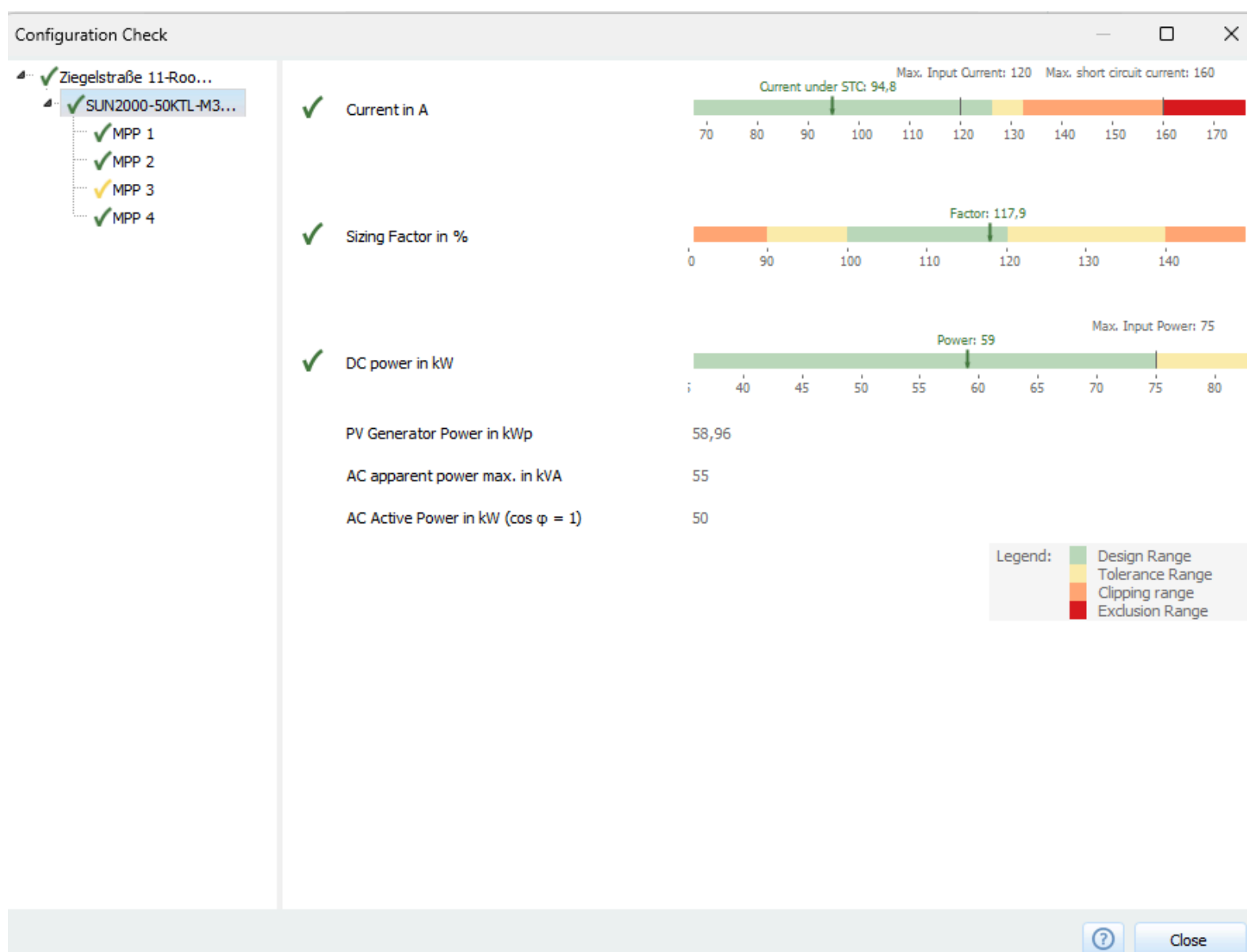
- Roof Geometry (Porrman Method): Manual tile counting is mandatory. Every dimension in PV*SOL (width, height, spacing) must align 100% with the actual roof measurements to ensure site compatibility.
- Rafter Spacing: Verify and apply global standards for rafter spacing based on the specific region (e.g., 60-90 cm) to ensure structural integrity.
- K2 Base Integration: A K2 Base report is mandatory for every project. This ensures compliance with UK/EU-certified structural tools, including wind and snow load calculations.
- Obstacles & Clearances: Standard maintenance and safety clearance gaps must be maintained around all roof obstructions (chimneys, skylights, vents).



What will be changed?

3. Database & System Optimization

- Manual Component Entry: If a specific panel, inverter, or battery is not available in the Valentin Software (PV*SOL) database, it must be manually created using the official manufacturer datasheet. All technical parameters (V_{mp} , I_{mp} , Efficiency, etc.) must be double-checked.
- DC/AC Ratio & Capacity: System sizing must be optimized based on inverter efficiency curves. Maintain a professional DC/AC ratio (typically between 1.2 and 1.3 unless specified otherwise) to ensure maximum yield.
- Hybrid Systems: For projects involving Battery Storage (BESS), Electric Vehicles (EV), or Heat Pumps (HP), integration must be modeled using realistic load profiles to demonstrate self-consumption (Autarky) benefits.



What will be changed?

4. Simulation, Shading & Losses

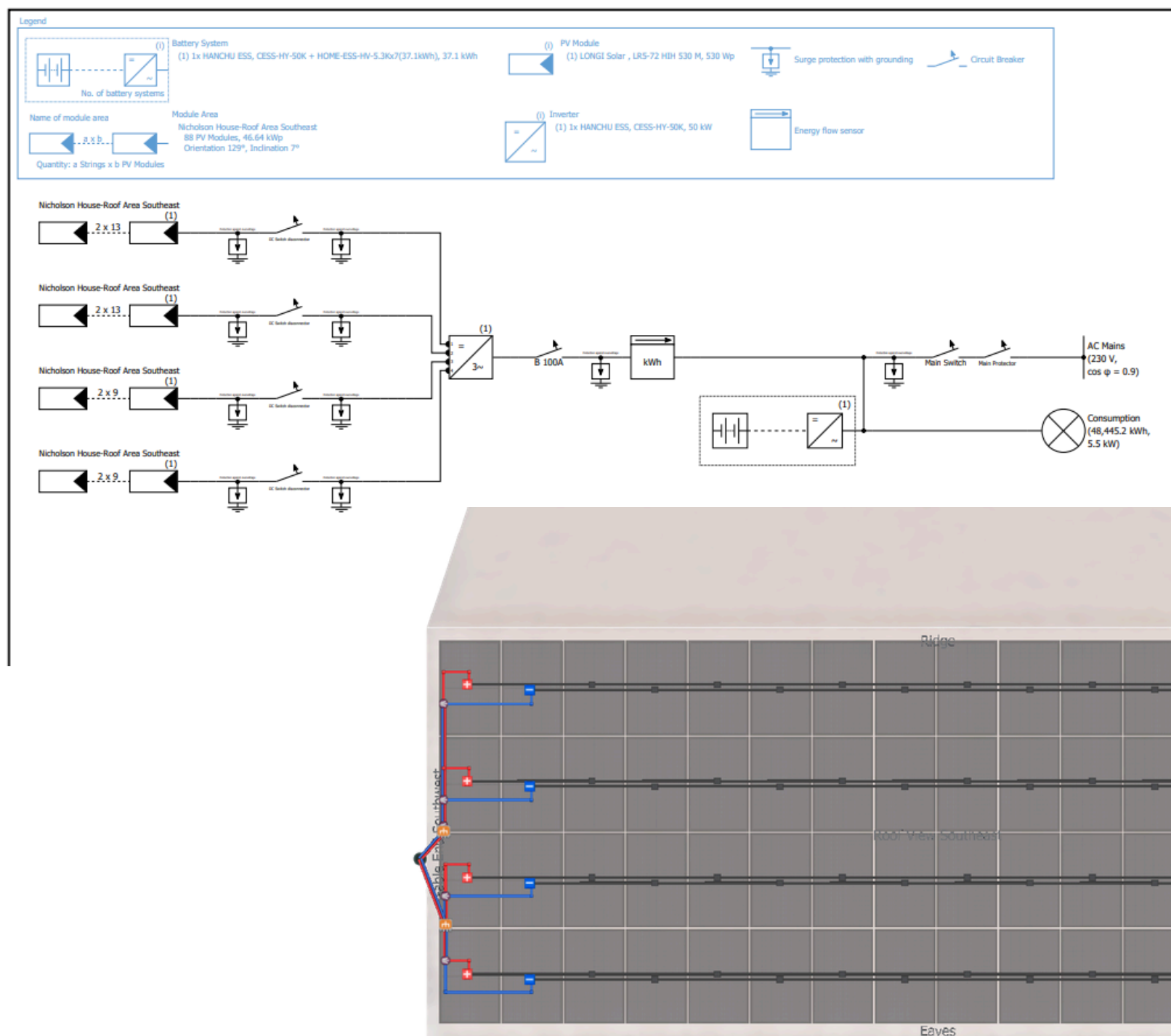
- Climate Data Hierarchy: Use Meteonorm, PVGIS, or Meteostat. Choose the source with the most recent data set and closest proximity to the project site.
- Shading Protocol: Every individual module must undergo a shade analysis. Any panel with an annual shading loss of over 15% must be screenshotted for the report and subsequently removed from the final design.
- Loss Factors: * Apply a constant 1.5% soiling loss to all simulations.
 - Component lifespans must be sourced from official datasheets and reflected in the financial analysis.



What will be changed?

5. Electrical Planning & Wiring

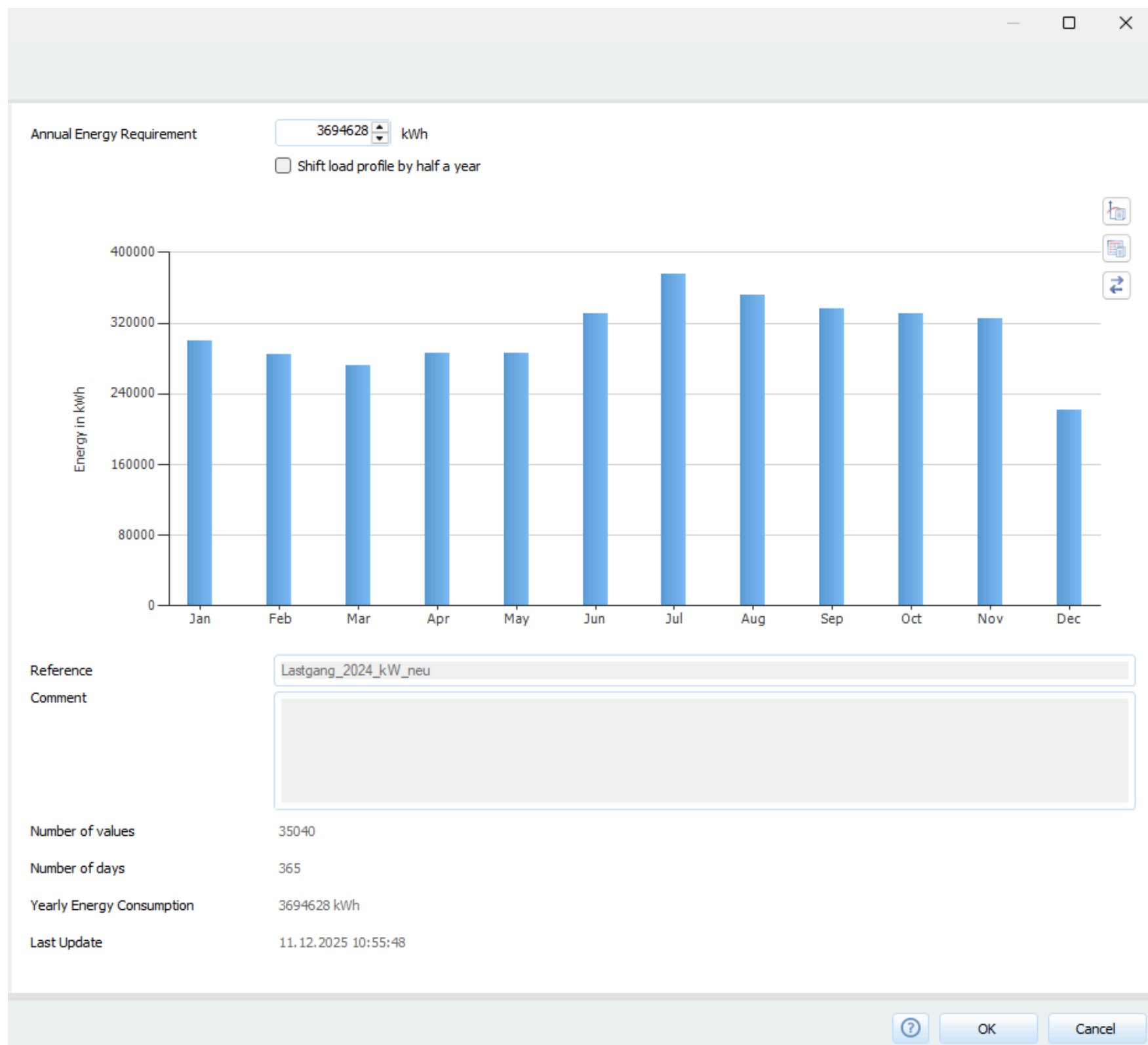
- Cable Routing & Management: All DC/AC cable routing must be designed neatly, logically, and systematically.
- Voltage Drop Analysis: Perform a detailed analysis of DC/AC voltage drops. Ensure that losses stay within the professional standard (typically <1% for DC and <3% for AC).
- SLD Generation: Utilize the four standardized templates for automatic Single Line Diagrams:
 - GER-Res / GER-Com (VDE standards)
 - UK-Res / UK-Com (MCS/IET standards)



What will be changed?

6. Consumption Profiles & Realistic Modeling

- Load Accuracy: Implement realistic consumption models.
Accuracy regarding peak loads and daily usage patterns is critical to provide the client with a true-to-life Autarky/Self-consumption rate.



What will be changed?

7. Visuals, Branding & Delivery (SLA)

- Fotoplan: If site/drone photos are available, a Fotoplan (superimposing the 3D model onto the photo) is mandatory for realistic visualization.
- White-Label Branding: No report is to be delivered without the client's company logo and branding.
- Service Level Agreement (SLA):
 - Standard projects must be delivered within 24 hours.
 - Urgent requests must be prioritized and delivered within 2 hours.



What will be effected?

We are upgrading our design service to a full-scale engineering powerhouse! Your projects will now feature high-precision digital twins via Google SolarAPI, regional Single Line Diagrams (SLD), and K2 Base structural reports accurate down to the last roof tile. To ensure a seamless installation, we've added detailed cable routing plans, exact bill of materials (BOM), and voltage drop analyses, eliminating all on-site guesswork for your teams. With realistic energy simulations and 'installation-ready' technical outputs, we don't just design we optimize your entire workflow.

