

# TRACKERS AND FOUNDATIONS STRUCTURAL RELIABILITY FROM DESIGN TO OPERATION

Maximizing availability, extending lifetime,  
and securing long-term PV performance

## SERVICE OVERVIEW

ENGIE Laborelec delivers top-tier engineering expertise to ensure that PV tracker systems and foundations are designed and maintained for long-term reliability. We work across the entire asset lifecycle — from early-stage supplier and material selection to in-depth inspections and corrective engineering for operational assets.

Our unmatched combination of lab capabilities, field diagnostics, and structural analysis ensures your infrastructure performs at its best, even under the most challenging environmental conditions. Whether you're launching a new site or safeguarding a 10-year-old fleet, we help you minimize risk, extend system lifetime, and protect your investment.

## EXPERTISE TYPE

- Bankable, independent engineering expertise.
- Top-of-the-line technical authority for development and operational support.
- Proven capability across extreme environments, large-scale assets, and critical infrastructure.

## LEAD EXPERTS

- **Frits Petit** – Wind load and structural mechanics.
- **Pieter-Jan Desmet** – Foundation design and soil-structure interaction.
- **Jan Wielant, Matteo Caruso** – Corrosion diagnostics, RCA, and mitigation engineering.
- **Sokratis Iliopoulos** – Concrete diagnostics and repair strategies.

## WHY ENGIE LABORELEC?

- **Best-in-Class Engineering** – Trusted by leading developers and IPPs for the most demanding PV projects.
- **Lifecycle Optimization** – Maximize asset lifetime through proactive design and predictive maintenance.
- **Built for Harsh Conditions** – Proven experience in corrosive soils, high-wind zones, and complex geotechnical sites.
- **Actionable, Bankable Results** – Quantified risk mitigation and O&M savings backed by expert diagnostics.



## OUR SERVICES

### DEVELOPMENT-PHASE ENGINEERING

- **Supplier Due Diligence & Corrosion Risk Assessment** – Select robust partners and materials from day one and establish adequate ageing management strategies.
- **Design Validation & Structural Load Analysis** – Confirm wind and mechanical resistance, aligned with local codes.
- **Foundation Engineering & Material Selection** – Adapt designs to terrain and corrosivity, including pre-drilling, concrete, or hybrid foundations.

### OPERATIONAL SERVICES

- **Lab Testing & On-Site (Corrosion) Inspections** – Investigate coating and concrete degradation, galvanization performance and soil aggressiveness.
- **Non-Destructive Testing & Preventive Maintenance Planning** – Protect structural health with predictive inspections and maintenance.
- **Root Cause Analysis & Structural Integrity Assessment** – Resolve underperformance or degradation with precision.
- **Concrete Rehabilitation & Repair Engineering** – Restore long-term reliability with durable corrective actions.

## CLIENT BENEFITS

- **Confidence in Structural Integrity** – Assure mechanical resilience from installation to year 30.
- **Lower Lifecycle Costs** – Avoid overdesign, reduce maintenance, and extend replacement timelines.
- **Independent, High-Impact Expertise** – Benchmark your project against industry best practices and go beyond compliance.
- **Optimized Foundations & Tracker Systems** – Built to last, engineered to perform.

## REFERENCES

ENGIE Laborelec supports some of the **largest and most technically demanding PV projects worldwide**, delivering services across **four continents on >1.2 GW of assets annually and in complex geotechnical and corrosive conditions**.

Our combination of **in-house lab analysis, onsite inspections, and deep structural expertise** ensures long-lasting, bankable solutions — from development to operation.

**Build with confidence. Operate with certainty.**  
**Trust ENGIE Laborelec to ensure your PV structures and foundations perform for decades.**



## WOULD YOU LIKE TO KNOW MORE?

ENGIE Laborelec

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