

Real Simulation Enterprises

Your Partner in Sustainable Energy Solutions



Our Vision, Mission, and Values

Mission

To help customers achieve their business objectives by providing engineering solutions and best-in-class field services in renewable energy.

Vision

To become a complete, cost-effective solution provider for every client we partner with, ensuring long-term success.

Values

- High-quality deliverables
- Passion with excellence
- Continuous learning and sharing
- Respect for individuals

About Real Simulation Enterprises (RSE)

Real Simulation Enterprises (RSE) is a dynamic firm driven by creative and innovative professionals, many of whom are Masters graduates from India's top institutes like I.I.T. and Government Engineering College.

Our team possesses extensive domain expertise, having collaborated with Fortune 500 companies both internationally and within India. We offer personalized services and solutions, precisely tailored to your requirements.

RSE empowers wind turbine component manufacturers and Independent Power Producers (IPPs) to remain agile, adapt to market shifts, and achieve rapid results. We forge strategic alliances with other companies to deliver comprehensive solutions to our valued clients.



Key Management Team

RSE

Mrs. Pallavi S. Sarpate – BE (GECA, Aurangabad)

She has **over 23 years of rich experience in leading and managing enterprises**, with a proven track record in driving business growth and organizational development. As the **Managing Director and Proprietor** of the company, he has been instrumental in **policy formulation, strategic decision-making, and business strategy planning**. Her leadership has consistently focused on building sustainable business models, fostering innovation, and steering the company towards long-term success. <https://www.linkedin.com/in/pallavi-sarpate-031aa3311/>



Mr. Shankar K. Sarpate – M. Tech –Mechanical from IIT Madras

An **Ex-DRDO Scientist (RCMA(AA))** with over **27 years of extensive experience** in India's leading **R&D and engineering organizations**, he has contributed significantly to advanced research, product development, and technology implementation. His career includes key roles at **Jyoti Ltd, Atco R&D, HAL Nashik, DRDO (RCMA(AA)), Suzlon Energy Ltd, and Siemens Gamesa**, where he was involved in high-end projects, technical evaluations, and innovation-driven solutions. Currently, he is serving as the **Head – Operations at Real Simulation Enterprises, Pune**, where he leads operational excellence, strategic growth initiatives, and execution of advanced engineering projects.

<https://www.linkedin.com/in/shankar-k-sarpate-b2a0a516>



Mr. Chandrakant Khirade, Sale & Marketing– Over **23 years of rich international experience** across diverse markets, including the **UAE, UK, and India**. His expertise lies in **international sales, business development, and high-value negotiations**, where he had successfully driven growth and forged strong client relationships. Currently, he is heading the **UK operations of Real Simulation Enterprises** as the **Country Manager – UK**, leading strategic initiatives, managing key accounts, and strengthening the company's global footprint.



Ms. Tanisha S. Sarpate, B.Des (Pursuing)

Diverse experience through various roles, including working as a **UI/UX Designer at Eager Technologies Services Pte. Ltd., Singapore** for six months and as a **Product Design Intern at iCreate, Ahmedabad**. She is currently pursuing an internship as a **Computational Design Intern at IISc, Bangalore**, where her focus is on computational methods and design applications. Her work has also involved **report finalization, preparing technical overviews, and documentation**. Presently, she is working as a **Trainee Engineer**, further enhancing my technical and professional skills. <https://www.linkedin.com/in/tanishasarpate0903/>



Wind Resource Assessment (WRA) & Site Assessment



Wind Data Collection

Utilizing state-of-the-art meteorological equipment to collect high-quality wind speed, direction, and essential parameters.



Wind Data Analysis

Advanced in-house software (EaseWRA) analyzes wind speed, turbulence intensity, wind shear, and temperature, predicting precise wind roses.



Site Suitability

Our experts assess terrain, land use, and roughness length to identify optimal wind turbine installation sites.



Energy Production Estimation

Accurate energy yield predictions based on site-specific wind conditions, turbine characteristics, and loss considerations.



Customized Reports

Detailed reports include wind resource maps, seasonal variations, and recommendations for optimizing turbine placement.

Specialized Expertise



RCA Studies

Root Cause Analysis based on structural analysis, SCADA data, and turbulence for failure correlation. Successfully completed RCA for foundation bolt failures.



Performance Enhancement

Analyzing wind data, vibrations, and pitch angles of underperforming turbines to diagnose issues and optimize performance.



Pitch Setting Detection

Developed a methodology to detect initial pitch errors using a year's worth of SCADA data for precise adjustments.



Health Monitoring Software

Proprietary software for wind turbine health monitoring, currently in testing and set for release within three months.



Gust Analysis

In-depth analysis of gust events based on SCADA data to understand and mitigate potential impacts on turbine operation.

An illustration of a rooftop solar installation. Several blue solar panels are mounted on a light-colored roof. In the background, there are stylized, rounded hills in shades of orange and yellow, suggesting a sunset or sunrise. A chimney is visible on the right side of the roof.

Solar Projects: End-to-End Solutions

1. Feasibility

- Site Assessment
- Financial Analysis
- Permits & Regulations
- Energy Yield Estimation
- Grid Connection Assessment

2. EPC

- Design & Engineering
- Procurement
- Construction
- Testing & Commissioning

3. O&M

- Performance Monitoring
- Regular Inspections
- Cleaning & Repairs
- Data Analysis & Reporting
- Upgrades & Retrofits

Advanced Services

Comprehensive Support

- **Investment Analysis:** Detailed financial modeling for optimal investment decisions.
- **Dis-investment Support:** Expert guidance for asset divestment strategies.
- **Existing Loads Analysis:** Assessment of current energy consumption to optimize solar integration.

Specialized Technical Services

- **PVSyst Analysis:** Professional solar project simulation and performance validation.
- **Tendering Process:** Support throughout the tender process for project acquisition.
- **PPA Process:** Assistance with Power Purchase Agreement negotiation and finalization.

Advanced Wind Domain Services

Leveraging our in-house EaseWRA software for comprehensive Wind Resource Assessment (WRA), we offer:

WRA Analysis & Site Assessment

- Wind mast data analysis
- AEP calculations with loss consideration
- Uncertainty analysis
- Micrositing analysis
- Wind rose & energy rose calculations
- Terrain influence (losses)
- Probability of Exceedance

Other Wind Services

- Big data analysis
- RCA for wind turbine issues
- Blade repair procedure validation & witnessing
- Loads validation for tower height increase
- Loads validation for GEARBOX/main bearing
- Wind turbine performance enhancement through operational data

Case Study: Blade Repair & Verification

We provide comprehensive verification and quality assurance for wind turbine blade repairs.

Blade Repair Verification

We analyze and authenticate customer-provided repair procedures, ensuring structural equivalence and adding critical quality checks.



Application of Repair Verification

Our blade experts witness the repair execution, auditing the process against guidelines to certify proper application and long-term sustainability.



Blade Repair Design Documentation

We provide all necessary design documentation, outlining standards and protocols used throughout the project execution to ensure compliance.

Proven Expertise in Action

Wind Turbine Blade Restoration

- Validated and certified advanced blade repair processes.
- Implemented comprehensive repair solutions for optimal performance.

Structural Integrity & Inspection

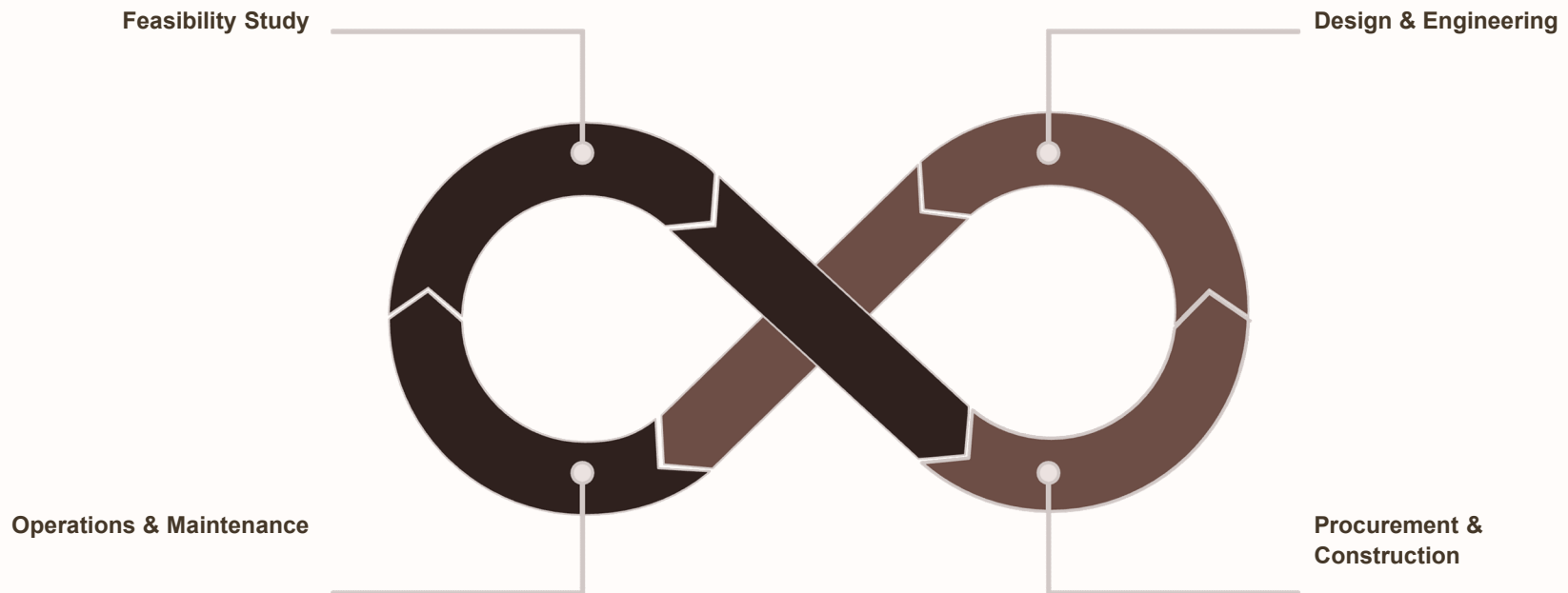
- Performed Root Cause Analysis (RCA) for foundation bolt failures.
- Rectified broken bolts, restoring initial strength and durability.
- Conducted precise visual and UT inspections for insurance claims on hub and blade pitch bearings.
- Executed borescope inspections of main shaft bearings for early detection of issues.

Solar Project Implementation

- Successfully commissioned two 10MW AC / 13MW DC solar projects (total 20MW AC / 26MW DC).
- Facilitated the execution of a 30MW AC / 42MW DC solar project.

Our Comprehensive Project Involvement

We seamlessly integrate into various phases of your renewable energy projects, offering expertise from initial concept to long-term operation.



Why Partner with Us?



Holistic Expertise

From detailed engineering to complex repairs and large-scale installations, our team covers the entire project lifecycle for both wind and solar.



Unwavering Quality

Our rigorous validation, certification, and inspection processes ensure the highest standards of quality and durability for your assets.



Problem Solvers

We specialize in complex challenges, providing Root Cause Analysis and innovative rectification techniques to extend asset life and improve reliability.



Scalable Solutions

Whether it's a critical component repair or multi-megawatt project commissioning, we adapt our services to meet your specific needs and project scale.

Our Valued Partnerships

We are proud to be a registered vendor with leading companies in the energy and industrial sectors, a testament to our reliability and service quality.



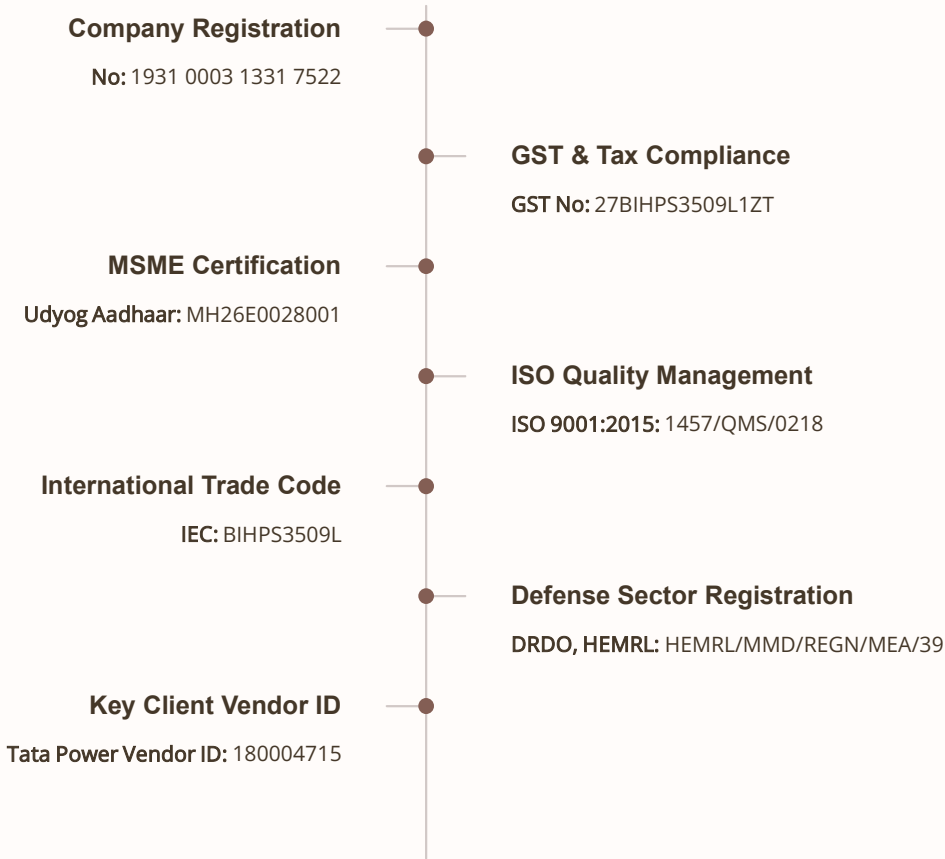
TATA POWER

Mahindra CIE

Our network continues to expand, with additional client registrations currently in process, further strengthening our commitment to the renewable energy ecosystem.

Official Registrations & Certifications

Our commitment to transparency and compliance is reflected in our robust suite of official registrations and certifications, ensuring peace of mind for our partners.



Thank You

Let's build a sustainable future together.

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