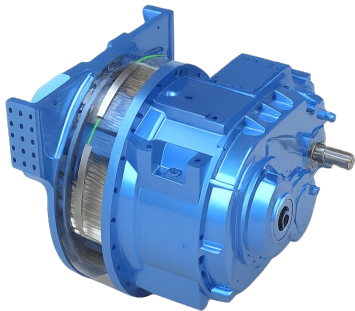




LumiSens GearUp

Optical system measuring operating loads on gearboxes



Predict planetary stage gearbox failures months before they cost you €450K.

Vibration-based CMS tells you a gearbox failure is underway by then, you're looking at €450K in replacement costs and months of lost production. Gearboxes account for 10–15% of turbine maintenance spend and are the single biggest driver of unplanned downtime. The industry monitors symptoms, GearUp measures the cause.



Measures real torque & load sharing

Direct shaft torque, planet gear load balance, and speed, not proxies or estimates.



Detects faults months before vibration

Catches overloads, torque transients, and imbalance long before they become failures.



Retrofits in hours, zero gearbox modification

Non-intrusive sensor strip mounts on the ring gear exterior. No teardown, no redesign.

40–50%

Reduction in unplanned downtime

20%

Lower O&M costs

<1%

Torque error validated at NREL

How it works

1

Install

Mount the optical sensor strip on the ring gear. No gearbox changes required.

2

Stream

Real-time torque, speed and load sharing data at 100 Hz via Modbus/ethernet

3

Act

API and/or cloud dashboard delivers fleet-wide insights for condition-based maintenance.

Typical payback

<18 mo

Onshore 3 MW

<12 mo

Offshore 6 MW

~1 yr

100 MW farm