OEM SPECIFICATIONS AND APPROVALS

	Preslia	Preslia GT	Preslia Evo	Preslia SE JET	Preslia SE HTS	Biopreslia HT	Azolla AF	Hydransafe FR EHC
TURBINE OIL								
Meets the requirements:								
ANDRITZ Hydro	Ľ					Ľ		
 GE GEK 27070, 46506, 28143, 101941, 32568, 107395 	\checkmark	Ľ	Ľ					
• GE LM series				Ľ	Ľ			A DECKER AND A DECKER AND A
 SIEMENS Industrial Turbo. AB MAT 812101 /02 /06/ 07 /08 /09 	Ľ	Ľ	Ľ					
 SIEMENS Turbomachinery 1CW0047915 	\mathbf{r}	Ľ	Ľ				1.4.0.0.0.0	
SOLAR ES 9-224, Class II	\checkmark	Ľ	Ľ				C.6.4.8.8.8	the Barrow
▶ VOITH Hydro						Ľ		e monta
Approved for:								
ALSTOM HTGD 90117	Ľ	Ľ					0.0.0.0.0.0	an the second
ALSTOM HTWT 600050	Ľ						1.2.4.4.6	11150000
ANSALDO TGO2-0171	Ľ	Ľ	Ľ					111111111
BAKER HUGHES ITN0000033		Ľ	*	Ľ			33333	CARLIET,
DOOSAN SKODA, Turbiny Plzen	\mathbf{r}	Ľ					66444	DATO ONT
FUJI ELECTRIC steam turbines	\mathbf{r}						ceded	Sec. 18
HTC HANGHZOU steam turbines							CAN BERT	
MAN ES TED 1000494596			Ľ				C.C.S.M.	
 NANJING Turbines (NTC) 		Ľ					e canada	Son to H
SHANGHAI ELECTRIC								1
SHIN NIPPON	Ľ						AVVVV	
► SIEMENS TLV 901304, 901305	\checkmark	Ľ	Ľ				<u>GGGG</u>	
 SIEMENS SGT-A05 (501-K), SGT-A35 (RB 211), SGT-A20 (AVON) 				Ľ	Ľ		IGGERN	
TOSHIBA steam turbines	\mathbf{r}						SSR	PPAKA
TRIVENI steam turbines	\mathbf{r}							Addi 13, 186

HYDRAULIC FLUID

Meets the requirements:

► ISO 15380 (HEES fluids)						
Approved for:						
ALSTOM HTGD 690149		50				Ľ
FUJI ELECTRIC	5	1.10				Ľ
• GE GEK 120319						Ľ
MHPS MS04-MA-CL004						Ľ
 SIEMENS zinc-free mineral hydraulic oils 					Ľ	
► SIEMENS TLV 901203	64//	1				Ľ

A major player

With our production, supply chain and commercial presence in more than 160 countries, we deliver a full range of lubricants.

References & OEMs

TotalEnergies Lubrifiants cooperates with equipment manufacturers to create high-technology products for optimal performance and production of your machinery.

good reasons for choosing **TotalEnergies** Lubrifiants

Quality and environment

TotalEnergies Lubrifiants ISO 9001 and 14001 certifications are the guarantee of a long term commitment to quality and environment. From the initial design stage, our R&D teams seek to develop products that minimize toxicity risks and environmental impact.





lubricants.totalenergies.com ms.industry@totalenergies.com Safety Data Sheets are available at ms-sds.totalenergies.com

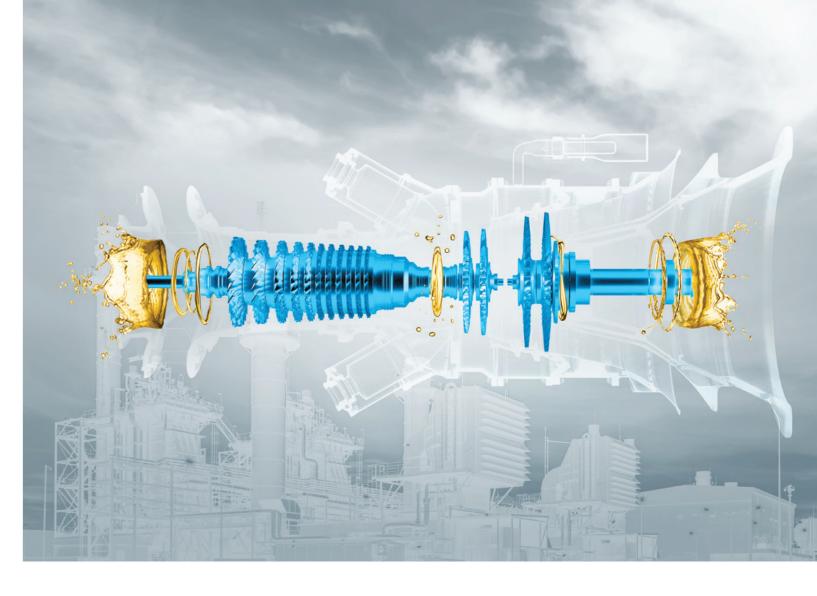
Support and partnership

Thanks to local technical presence, we provide a high level of service to optimize your Total Cost of Ownership.



Innovation & Research

TotalEnergies Lubrifiants invests in biotechnologies to find the most suitable components to reach energy efficiency through formulations designed in our Research Centers.



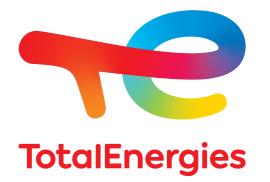
Preslia Turbine oil for efficiency & reliability

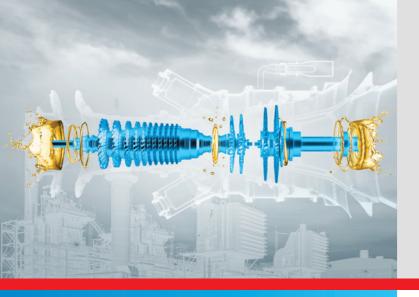
Ensuring your turbine's optimal performance





TotalEnergies Industry Solutions





Local presence

You can rely on **expert support** from our 130 affiliates and local supply chains to carry out your project wherever it is.

We give you direct access to our value-added services for turbines, including oil monitoring and implementation of our onsite turbine filling package.

Reliable performance

Our formulations are optimally balanced to **minimize** deposits, **protect** your turbine under the most demanding conditions and keep your operations trouble-free.

The long operating life of our turbine oils will help you maximize uptime and reduce your overall operating costs.

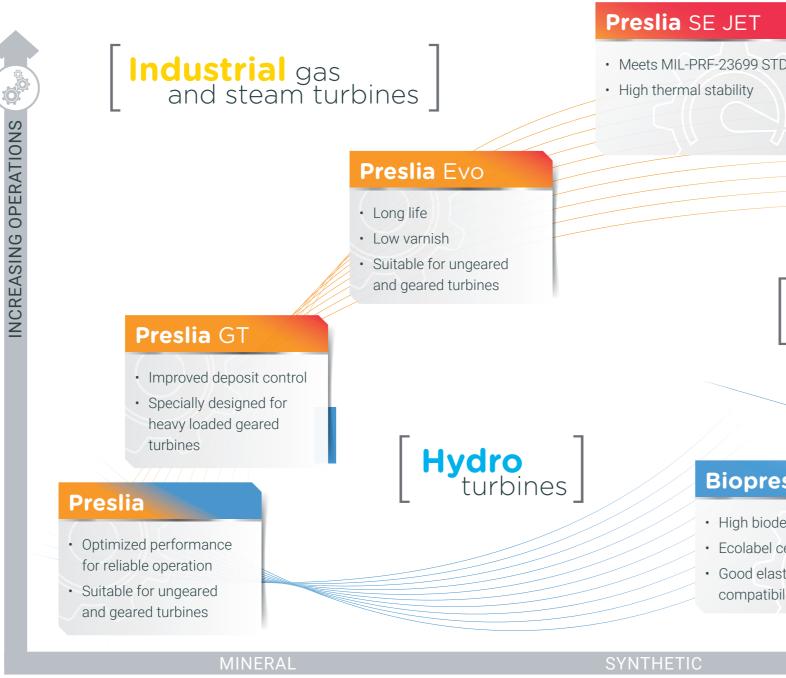


More than ever, **reliability and uptime** matter when it comes to supporting dispatchable and low-carbon power generation.

At TotalEnergies Lubrifiants, we understand the need for operation-specific solutions. With the benefit of our extensive experience with original equipment manufacturers, we offer you a complete range of lubricants and services for all turbomachines: hydro, steam, gas, combinedcycle turbines and turbo compressors.

Ramp up to full capacity with Preslia turbine oils!

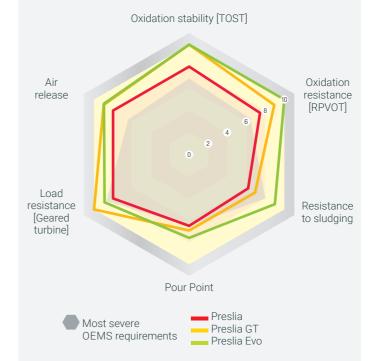




Wide expertise

We have broad experience across many sectors: fossil-fuel, nuclear, hydro, biomass, geothermal and concentrated solar power plants.

You are assured of manufacturer-approved products that have a proven track record in the field, from power companies to industrial processing plants.



TURBINE OIL

PERFORMANCE

EHC FLUIDS FOR STEAM TURBINES

Hydransafe FR EHC

- Phosphate ester hydraulic fluid
- Superior fire resistance
- Improved health and safety performance

Flushoil FR EHC

- Phosphate ester flushing fluid
- Improved system cleanliness
- Easy maintenance

Azolla AF

- Ashless mineral hydraulic oil
- Applications without fire risk

SERVICES TAILORED **TO YOUR NEEDS**

Oil condition monitoring



LubAnac is an in-service oil monitoring solution to help you optimize drain intervals and extend the service life of your equipment.

For turbines, TotalEnergies Lubrifiants has developed **LubAnac Turbine**, a package to monitor the parameters that are critical for their operation:

- LubAnac Water Content (Karl Fischer Method) from 10 ppm to detect accidental water pollution, ideal for hydro, steam, or gas turbines operating in a humid environment.
- Air release and foaming to prevent wear and control malfunctions caused by the presence of air bubbles in the oil, regardless of turbine type.
- Presence of oxidation and varnish precursors (Membrane Patch Colorimetry method) to avoid lacquering of critical components and coolers in both steam and gas turbines.

Oil system maintenance



Our teams can **assist you anytime** to keep your lube oil system in good conditions. It includes:

- Flushing and first fill operations
- Oil tank cleaning
- Oil filtration
- Water removal from oil
- Prevention of varnish build-up
- Waste oil management

Preslia SE HTS Meets MIL-PRF-23699 HTS

 Enhanced thermal stability Low coking

> Aeroderivative gas turbines

Biopreslia HT

- High biodegradability Ecolabel certified Good elastomer
- compatibility

OIL PERFOMANCE