

Mining Energy solutions

Things improve
as you measure them



TotalEnergies

COMMITMENTS

1. HIGH HSE STANDARDS
2. RELIABLE SUPPLY OF HIGH QUALITY PRODUCTS & SERVICES
3. COST IMPROVEMENT (TCO) & ENERGY EFFICIENCY
4. REDUCED ENVIRONMENTAL IMPACT / CSR
5. INNOVATION & DIGITAL TOOLS



01 OCEAN DEPOT



LNG



PRODUCT CLEANLINESS \$

ANAC OIL DIAGNOSIS \$

HSE ENERGY AUDIT \$

RENEWABLE ENERGY SOLUTIONS



FACILITY MANAGER \$

OPTIMIZER \$

SMART TANK

05 POWER & PROCESS PLANTS



LUBRICLEAN OPEN GEARS \$

ELIXORE DILUENT \$

SAFT BATTERIES

RENEWABLE ENERGY SOLUTIONS

03 TotalEnergies SERVICE STATION & DEPOT



EXCELLIUM \$

SMART TANK \$

DEPOT SOLUTION \$

LOCAL COMMUNITY

OFFGRID SOLAR SOLUTIONS



02 INLAND SUPPLY

SAFETY PATROM

ROAD DELIVERY

WHERE IS MY TRUCK?



FILTRATION \$

LUBRICANTS RUBIA WORKS \$

TIRE SAVER SHIELD \$

EXPLOSIVES / BLASTANE

FUEL ECONOMY LUBRICANTS \$

04 MINING SITE



SAFT BATTERIES

DEPOT SOLUTION \$

OPERATIONAL PERFORMANCE

REACHING BEYOND

ENERGY TRANSITION

TCO REDUCTION*
*Total Cost of Ownership

TotalEnergies' commitments

We add value by understanding your needs

After decades of working closely with the Mining Industry and servicing your energy needs, we better understand your key challenges. With these challenges in mind we have designed a range of solutions to address the 5 main areas of need.

01

HIGH HSE STANDARDS

TotalEnergies SAFETY RULES

- 12 HSE Golden Rules
- Transport security program (Patrom)
- Waste management
- HSE Audit
- Safety Training

02

RELIABLE SUPPLY OF HIGH QUALITY PRODUCTS & SERVICES

AN INTERNATIONAL NETWORK OF EXPERTS

- Change Management
- Field Operations
- Mining expertise
- Choice of products (lubricants, fuels, LPG, LNG, HFO, explosives, solvents, dust binder)

MANAGEMENT

- Consignment stock
- Depot management
- In-pit services
- Used oil analysis (Anac Oil Diagnosis)
- Maintenance software (TIGS)
- Filtration solution to ensure product cleanliness

TRAINING OF YOUR TEAMS

- Gain in-field skills

MODULAR, MOBILE AND FLEXIBLE OFFER

- Fixed, mobile and temporary tanks

QUALITY WARRANTY

- ISO certifications (amongst others)
- International standards (API, JASO, etc...)
- OEM approvals

03

COST IMPROVEMENT (TCO) & ENERGY EFFICIENCY

SUPPORT IN THE OPTIMIZATION OF YOUR VALUE CHAIN

- Multi-Energy Management (Optimizer)
- On-site cost control and energy consumption software
- Used oil analysis (Anac Oil Diagnosis)
- Stock management
- Lubricants rationalization
- Mega Tire Saver Shield
- Energy efficiency audit
- Dust Binder

CHOICE OF SUITABLE PRODUCTS

- Premium fuel for better engine performance (Excellium)
- Fuel Economy lube (reduced consumption)
- Rubia Works (extended drain interval) and off road lubricants
- Industrial lubricants
- Lubriclean EP for open gears
- Elixore diluent for hydrometallurgy

STAKEHOLDER TRAINING

- Better use so less waste

04

REDUCED ENVIRONMENTAL IMPACT / CSR

REDUCED CO₂ EMISSIONS

- Solar and Wind energies
- Energy storage Saft batteries
- LNG, Hydrogen
- Environment friendly products

LOCAL COMMUNITY SOLAR SOLUTIONS

05

INNOVATION & DIGITAL TOOLS

INNOVATIVE SOFTWARES TO OPTIMIZE PROCESSES

- Multi-Energy management (Optimizer)
- Where Is My Truck?
- Monitor your stock (Smart Tank)
- Used oil analysis (Anac Oil Diagnosis)



A RANGE OF DEPOT SOLUTIONS TO FIT YOUR NEEDS


Depot construction

The right storage facility adapted to your needs

TotalEnergies's in-house engineers help our customers size and design their fuel and lubricant depots according to the mine's operational needs with the highest level of safety standards.

TotalEnergies provides and builds different sizes of storage solutions : from mobile fuel tanks that can easily be moved to ensure a close proximity to the work site, to large fixed tanks which can last 50 years with optimal operation processes. TotalEnergies's dedicated technical experts will provide guidance every step of the way.

BENEFITS:



- **Adapted** to the project needs
- **Optimized** storage solution to ensure operational excellence 
- **Safe** facilities built in accordance with international standards for fuel

Depot management

Choose a turnkey solution to strengthen your performance

TotalEnergies manages the fuel and lubricant facilities with the highest level of safety standards and even provides consignment stock services. The depot is operated by professional and trained staff who can provide detailed reporting of volume usage with reconciliation between deliveries and dispensing.

BENEFITS:

- **Strengthened** performance by ensuring product availability 
- **Decreased** working capital requirement by not owning the stock 



OPERATIONAL PERFORMANCE



P5

P4

HIGH PERFORMANCE PRODUCTS FOR EVERY APPLICATION



Excellium

The fuel that cleans your engine hour after hour

As heavy duty engines are sensitive to fouling, TotalEnergies Excellium helps to clean the injectors to keep optimum engine performances. A clean engine uses less fuel, pollutes less and lasts longer.

BENEFITS:

- **Reduced** fuel consumption
- **Reduced** CO₂ emissions
- **Improved** engine life



NB : When bulk fuel delivery is not available in the country, TotalEnergies Excellium Concentrate Diesel will be offered as an additive to your current fuel.



Rubia Works

Improve engine protection and increase drain intervals

TotalEnergies Rubia Works is a range of dedicated mining engine oils to reduce time spent in maintenance and increase operating hours. With products meeting and exceeding the latest manufacturers' requirements, it is fortified in anti-wear and anti-oxidant agents for outstanding engine protection and extended drain intervals.

BENEFITS:

- **Outstanding** engine protection
- **Extended** oil drain intervals
- **Lower** fuel consumption and reduced CO₂ emissions (fuel economy grade)



Elixore

Aliphatic diluents dedicated to hydrometallurgy (sx-ew)

The Elixore range offers a comprehensive choice of perfectly inert, colorless and odorless diluents with ultra low aromatic content. Each product is tailored to provide the optimal balance between desired level of efficacy (viscosity) and necessary level of operator safety (high flashpoint).

BENEFITS:

- **Superior** extraction efficiency based on selectivity
- **Highly** stable products for sustainable performance
- **Environment friendly**
- **Improved** working conditions
- **Lower** consumption



Blastane

Better explosive performance with reduced environmental impact

Applying high purity hydrocarbon fluids for ammonium nitrate explosives enables you to get better performances, improved working conditions for operators and reduced environmental impact. No aromatics, no odors, colorless and high emulsion stability will provide a cleaner and more efficient workplace.

BENEFITS:

- **Non-toxic** for workers and the environment
- **Highly** stable for emulsion
- **Better** performances



Mega Tire Saver Shield

Increase tire life & improve equipment availability

Hutchinson, a TotalEnergies company, has developed Mega Tire Saver Shield to provide protection to the highly stressed tire side walls of vehicles used in industrial and mining environments : Mega Tire Saver Shield creates a barrier inbetween the tire sidewall and damaging terrain such as rocks, metal objects, rebar and other harmful debris.

BENEFITS:

- **Protection** against sidewall cuts
- **Increased** tire life and improve equipment availability
- **Reduced** tire cycle costs
- **Improved** safety by reducing frequency of extremely dangerous blowout events
- **Ease** of attachment with universal adapter that fits any wheel size



<https://www.hutchinsoninc.com/defense/tire-saver-shield/>



OPERATIONAL PERFORMANCE



CONTINUOUS SUPPORT ENSURING PEACE OF MIND

Fluid cleanliness and contamination management

Meet OEM's warranty obligations and increase your equipment availability

TotalEnergies has strict loading and transportation procedures, coupled with a range of on-site filtration options for both fuel and lubricants, that not only help you meet the OEM warranty obligations, but also help increase your equipment availability and reduce your TCO.

BENEFITS:

- **Reduced** maintenance costs
- **Increased** equipment availability
- **Improved** equipment life time



Anac Oil Diagnosis

Optimize operating costs with predictive maintenance

The TotalEnergies Anac Oil Diagnosis program is a service designed for predictive maintenance. Based on millions of oil analyses performed on all kinds of equipment over several decades, Anac Oil Diagnosis offers diagnosis for preventive maintenance and optimization of lubricant usage, extending the oil drain intervals and increasing the lifespan of equipment.

BENEFITS:

- **Prevention** of failures and downtime
- **Extended** life of the equipment
- **Optimized** maintenance of vehicle fleet and equipment
- **Reduced** lubricant consumption



HSE energy audits

Personalized recommendations to improve HSE standards

TotalEnergies provides HSE audits that are tailored to your needs in order to improve and comply with the highest Health, Safety and Environment standards. Our specialists audit the full supply chain and operations to deliver a report with recommendations.

BENEFITS:

- **Strengthen** your performance with better energy consumption
- **Safe** workplace environment
- **Strong** HSEQ policies for hydrocarbon operations
- **Waste** oil management
- **Stringent** transport policies
- **Assessment** for transition to low carbon energy



Safety management and Patrom standard for transport

Continued focus on developing a safety culture

TotalEnergies dispenses specific and continuous safety training to its staff in order to operate the depots with the highest safety standards providing a safe workplace for all workers on site. Our Patrom transportation program ensures petroleum products are transported safely through rigorous driver training and the consistent quality monitoring of the fleet.

BENEFITS:

- **Safe** workplace environment
- **Continued** focus on developing a safety culture on-site
- **Guaranteed** product quality through stringent transport policies



OPERATIONAL PERFORMANCE



ADVANCED SOLUTIONS TO REDUCE YOUR TCO EVEN MORE



Fuel Economy lubricant range

Reduce fuel and electricity consumption

TotalEnergies has developed several solutions to lower energy consumption and environmental footprint on the mine. In the pit, a special FUEL ECONOMY engine oil, **Fuel Economy FE**, has proven to reduce fuel consumption by up to 1,89%. In the plant, synthetic **Carter SG**, can decrease electricity consumption by up to 5% on large gearboxes.



BENEFITS:

- **Lower** fuel consumption and reduced CO₂ emissions
- **Lower** electricity consumption
- **Lower** downtime due to refuelling



Lubriclean EP Open gear cleaning

Clean your asset without stopping operations

TotalEnergies proposes a safe, unique and innovative product to clean open gears while the mills are still running, reducing downtime from several days to nil. Productivity is drastically increased and cleaning is facilitated, so that the user can verify the state of the gears at all times.



BENEFITS:

- **Safer** open gear cleaning
- **Up to 48h** of productivity increase per shutdown
- **Cleaner** open gears leading to reduced wear and longer life of the gear



Optimizer

The multi-energy management solution

Working with you to identify the profit killers on your site

Optimizer is an energy efficiency service combining both the support of our industry and energy experts and our digital platform. It consolidates all of your fuels, lubricants and electricity usage and consumption information, analyzes it for inefficiencies and gives you the information you need to help you take prompt action.



BENEFITS:

- **Reduce ALL** energy consumption and cut operational cost
- **Tailormade** dashboards for each division of the mine
- **Real-time** data consolidation, alerts and reports
- **TotalEnergies** experts team support for your continuous improvement plan
- **Tracks** your CO₂ emissions records



Smart Tank

Monitor your product stock levels 24/7

Smart Tank is a solution that uses IoT (Internet of Things) sensors so that you can remotely see your products stock levels via a 24/7 portal. How does it work? First, the sensors collect relevant data from your tanks and send it to the IoT Data hub. Then, the hub analyzes this information and makes it usable and exportable. Finally, Dataviz gives you a graphic representation of your data and sends you alerts when necessary.



BENEFITS:

- **Logistics** optimization: know your stock levels at all times
- **Detection** of leakages and fraud
- **Real-time** alert system
- **Prompt** order to avoid stock-outs



REACHING BEYOND



ADVANCED SOLUTIONS TO REDUCE YOUR TCO EVEN MORE



Where Is My Truck?

Real-time delivery tracking

Where Is My Truck? is a solution that gives you real-time information on the status of your TotalEnergies deliveries. It allows you to save time by reducing communications with TotalEnergies customer service, all while receiving a better quality of service.



BENEFITS:

- **Visibility of delivery status** and truck availability
- **Information** is sent directly to your mobile phone by SMS or e-mail
- **Secure application:** a unique link for each delivery and each client

Energy efficiency audits

Personalized recommendations for energy efficiency

TotalEnergies provides energy efficiency audits that are tailored to your needs to help you save energy and money. Our specialists audit the full supply chain and operations to deliver a report with recommendations. We can also train your staff.



BENEFITS:

- **Strengthen** your performance with better energy consumption
- **Respect** the international standards for fuel facilities



EXPERTS HELPING YOU ON YOUR JOURNEY TO LOW CARBON ENERGIES

Renewable energy solutions

To reach your climate ambition

TotalEnergies expert teams develop on-site and off-site solutions to produce solar and wind electricity to help you reduce energy costs and environment impact. We are present across the entire energy value chain to fast track the deployment of solar technology for any size of industrial projects: buildings' roof solarization, floating PV for large water reservoirs, (which also reduces evaporation), large solar farms, and even a solar-hybrid to add on to your existing hydrocarbon power generation.



BENEFITS:

- **A complete offer**, from design to installation commissioning, including operations and maintenance
- **Expertise** project financing and pre-project planning to assess the quality of resources on-site and optimize the energy mix
- **Benefit** from our experience with industrial and commercial customers and from our international footprint as the leading company in responsible energy



Saft batteries for off-road vehicles and facilities of the mine

Saft's battery know-how is focused on specific Off-Road applications where electric propulsion ensures an efficient and sustainable operation that reduces vehicle running costs throughout an extended service life. These batteries electrify underground LDH mining trucks, providing safe, particule free, and dependable vehicle operation. Saft MWh container size energy storage systems can also support the grid, providing clean power for charging, and other grid services needed on mining sites. At last, Saft energy storage solves renewables' intermittency and allows them to be integrated into baseload resource planning.



BENEFITS:

- **Reduced** ventilation, noise, and cooling
- **Excellent** life cycle
- **Fast** charging

<https://www.saftbatteries.com>



Offgrid solar solutions

Addressing your local community needs

Since 2010, TotalEnergies has been developing solar solutions to meet energy needs of people in emerging economies. The range of products includes "One Sunshine", a solar lamp for reading, working or getting around, the "Family Sunshine", a multi-purpose lamp for the house that can charge a phone, and the "Home Sunshine" kit, which includes 3 light points to illuminate the whole house, a radio and a torch. For professionals, they can choose solar street lamps which are completely autonomous and provide lighting for roads, building sites, warehouses...



BENEFITS:

- Environmental Friendly
- Fit for Purpose
- Affordable

<https://accesstoenergy.totalenergies.com/>



LNG small scale supply & Hydrogen

Among the lowest carbon available solutions

TotalEnergies is helping mining customers to support and develop energy transition projects providing LNG and green hydrogen for production and/or storage of power and heat, or as an alternative fuel for stationery or mobile equipments. The perfect fit with solar solutions to reach maximum energy efficiency and a minimum carbon footprint.



BENEFITS:

- The lowest carbon fossil solution available
- No sulphur content
- Safe and reliable technology
- Smooth consumption and emission tracking (mass-flow meters)

OUR NETWORK OF LOCAL, REGIONAL AND INTERNATIONAL EXPERTS IS DEDICATED TO PROVIDING YOU ON-SITE SUPPORT ON A DAILY BASIS.

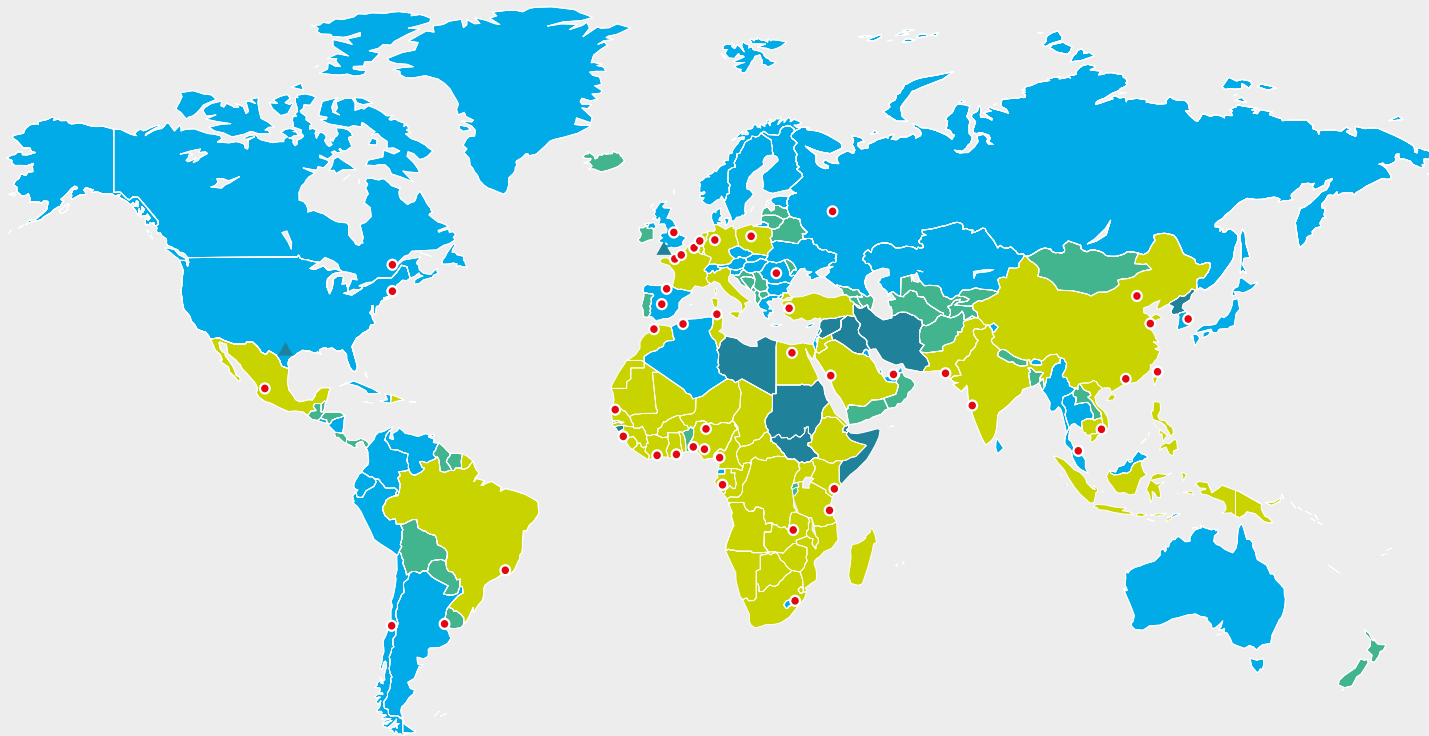


MORE THAN
600
MINING SITES
DELIVERED EVERY DAY

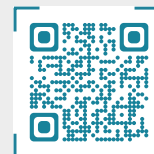
96
YEARS'
EXPERIENCE

107
COUNTRIES WITH
DIRECT PRESENCE

105 000
EMPLOYEES
TO SERVE YOU



- Service station network and B2B activities
- Petroleum products for B2B activities
- Presence of TotalEnergies trademarks via distributors
- No TotalEnergies presence
- Lubricants blending plants
- ▲ Special fluids plants



Visit our Mining Solutions website

Worldwide presence of TotalEnergies

TotalEnergies is a broad energy company that produces and markets energies on a global scale: oil and biofuels, natural gas and green gases, renewables and electricity. Our 105,000 employees are committed to energy that is ever more affordable, clean, reliable and accessible to as many people as possible. Active in more than 130 countries, TotalEnergies puts sustainable development in all its dimensions at the heart of its projects and operations to contribute to the well-being of people.



TotalEnergies