

CAT[®] SMART ENGINE MANAGEMENT SYSTEM (EMS)



OPTIMAL POWER FOR YOUR BUSINESS

Revolutionize your engine management with a data-driven solution—putting control at your fingertips.

The Cat® Smart Engine Management System (EMS) efficiently manages the number of engines required to satisfy your performance needs by continuously monitoring availability against demands.

Depending on the power demand and availability, engines are started or stopped automatically for efficient operation.

TECHNOLOGY ENABLER



Electronic Modular Control Panel 4.4

Embark on a journey of enhanced engine performance tailored to your application:

- Leverage technology leading companies trust using the EMCP 4.4. In the end, you get industry-tested combustion processes and reduced fuel consumption for your needs.
- Capable of paralleling and load sharing multiple packages



Human Interface Machine Panel

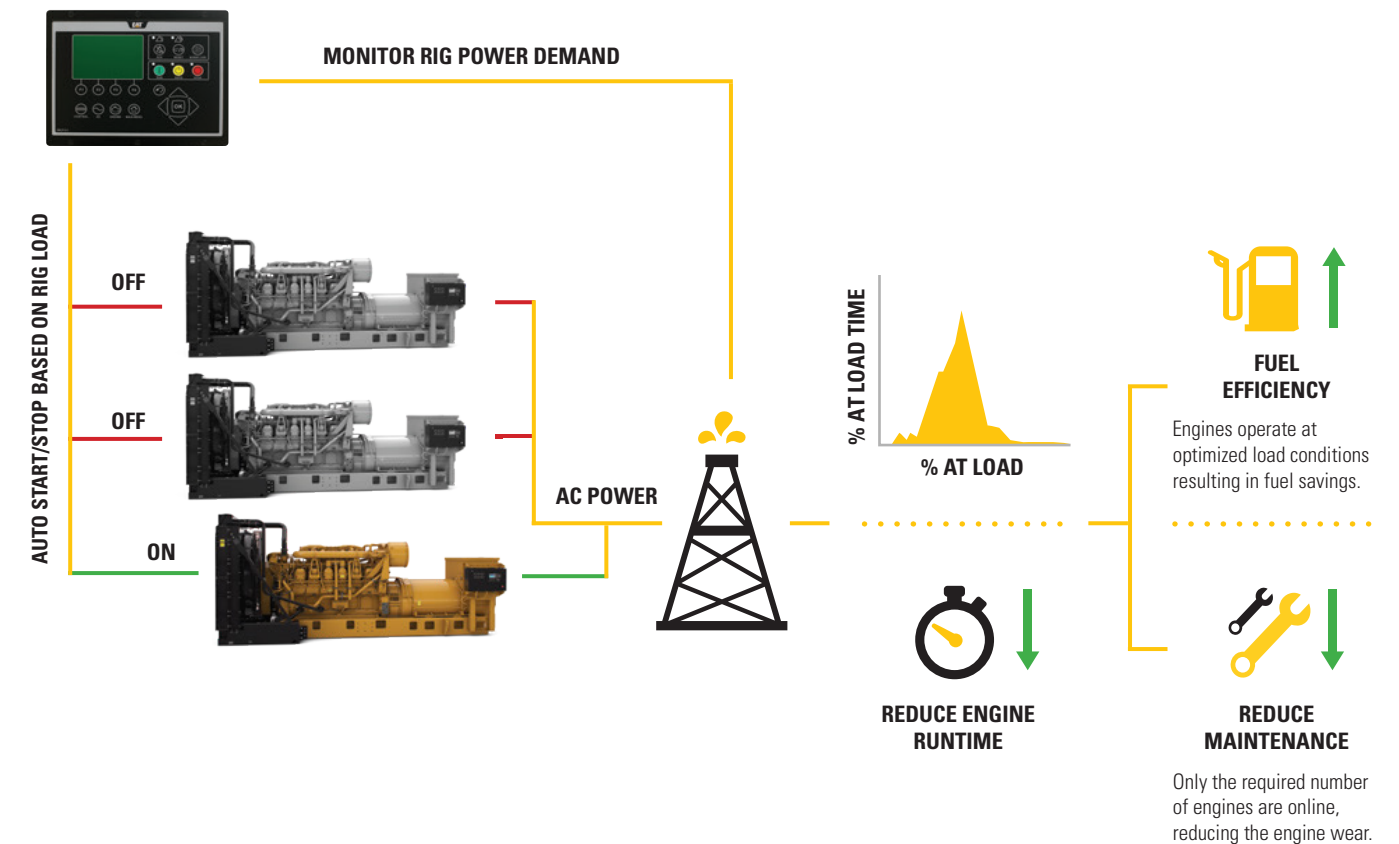
- Remote access and local control of generators
- Engine start safety precautions with visual and audible alarms before start and local lockout features

DATA-DRIVEN POWER PERFORMANCE

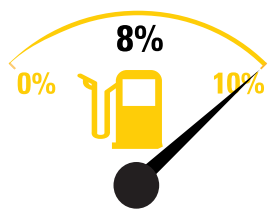
Cat® Smart EMS Optimizes fuel consumption by running the minimum number of units needed for your operations at their optimal load profile based on site demand.

Cat Smart EMS provides four customizable load profiles for optimal performance, across all stages on a drilling operation.

- Drilling
- Backreaming
- Tripping
- Standby



OPTIMIZED FOR YOUR OPERATIONS



FUEL SAVINGS

- Gain reduced fuel consumption with increased engine load factor
- See up to 10% reduction in fuel consumption, as compared to traditional configurations
- Improved gas substitution on Dynamic Gas Blending (DGB) engines



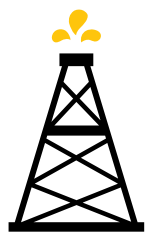
MAINTENANCE

- Reduce yearly maintenance cost with less engine run time
- Up to 25% reduction in engine runtime compared to previous engines



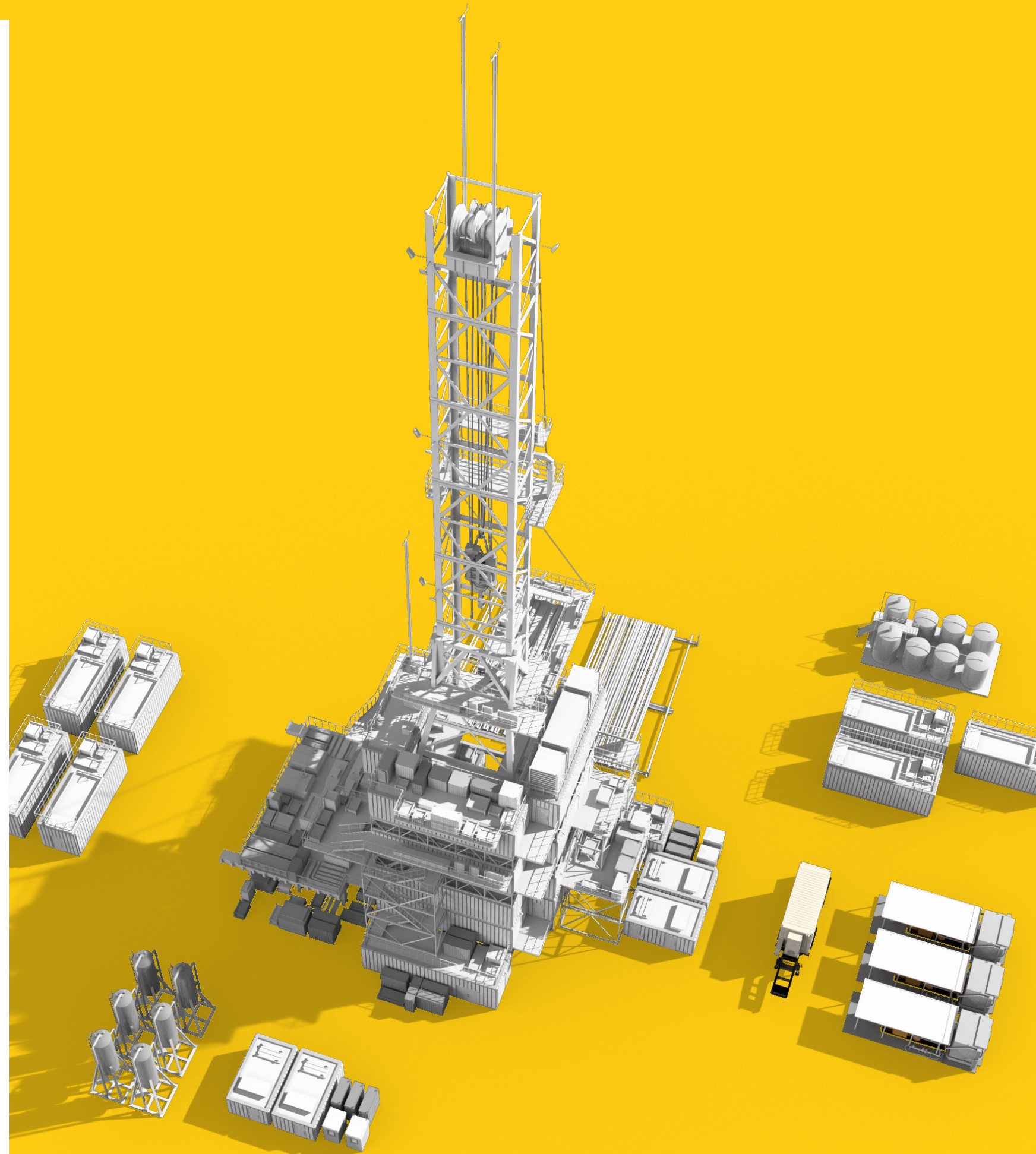
SAFETY

- HMI provides remote access to engine controls
- Enhanced safety for rig crew working around engines with local lockouts, visual and audible alarm before engine start-up



SIMPLIFIED RIG CONTROLS

- Reduced CAPEX for new rig builds as Cat Smart EMS replaces third party engine controllers
- Simplified power house layout and space savings by removing the engine controller from the power house



WE'RE HERE TO HELP

We continue to expand our offering of digital technologies in the Oil & Gas industry to help improve integration and operational efficiency. Whether for local installation or global support, the Cat dealer network is there for you. With more than 2,100 dealer locations world-wide, our dealer network is dedicated to more than your operation — we're committed to your reputation.

CONTACT YOUR LOCAL DEALER TO LEARN MORE

www.HybridESS.com

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