



SETTING THE STANDARD

# Advanced Generator Protection (AGP) System

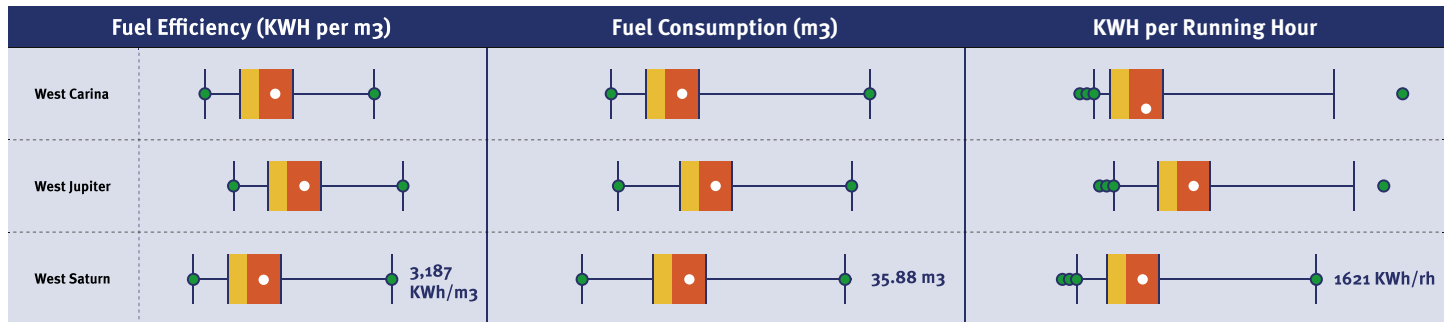
SETTING THE STANDARD - ADVANCED GENERATOR PROTECTION - OCTOBER 2024

**Seadrill** 

# The West Saturn AGP system and engine optimization is saving fuel and reducing emissions

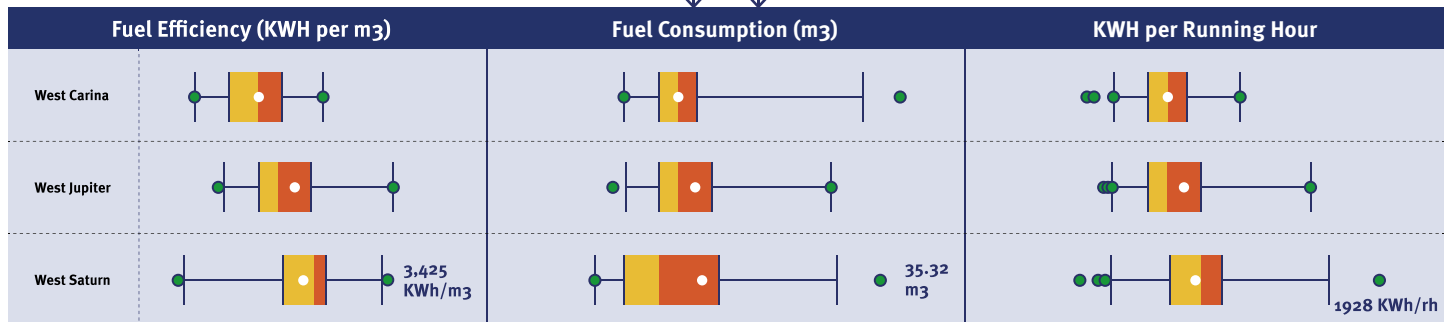
2023 April-August Efficiency

Total Power Produced 15.2GWh



2024 April-August Efficiency

Total Power Produced 17.7GWh



1.6% Reduction in fuel consumption with a 16.5% increase in power demand

18.9% Increase in power output for every engine running hour

7.5% Increase in overall fuel efficiency

West Saturn is the most fuel-efficient equivalent Seadrill rig in the region

## An Overview of Seadrill Sustainable Technology

In our efforts to build a more sustainable Seadrill, we are focused on where we can make the biggest difference. With decarbonization of marine fleets at the top of the sustainability agenda, Seadrill plans to implement Advanced Generator Protection (AGP) technology across all floaters and we are working closely with our clients to support this goal. Implementing technologies like AGP is a significant step forward in our industry, which not only provides substantial tangible benefits, but also enables many other minor energy efficiency initiatives to add value.

### Introducing AGP Technology

Seadrill's dynamically positioned vessels use electrically driven propellers to keep position (station keeping) during oil & gas drilling exploration, anchoring and port maneuvering. Safe operation of the system requires that no faults can occur resulting in a complete loss of power thereby allowing the vessel to drift off position. AGP systems enable the power management system to maintain operational safety while running in a Closed Bus Tie (CBT) configuration. Utilizing the CBT configuration allows the rig to distribute power safely and efficiently thus allowing the rig to run fewer engines.

## How CBT Configurations Work

Using a CBT configuration allows any load access to a common power source, using intelligent switching of delivered power with built in fail safes for security of operations. With this type of configuration, fewer power sources need to be online, and those that are running can operate more efficiently. Optimally loaded diesel generators have better fuel consumption and produce significantly lower Greenhouse Gas (GHG) emissions and reducing costs.

## Benefits to the Client

The Seadrill CBT configuration delivers fuel efficiencies, safe operations and significant environmental benefits for our clients:

- Fuel consumption reduced by up to 8%
- CO2 reduction of up to 8%
- NOX reduction up to 10%
- Engine running hours reduced by up to 20%

## West Saturn Case Study 2023

- **AGP Technology Installation:** The West Saturn, a seventh generation ultra-deepwater drillship, was upgraded with the AGP system for safer, smarter, more efficient, and less carbon-intensive operations. This includes running high-voltage switchboards in a CBT configuration.
- **Key Benefits:** The AGP system allows the West Saturn to operate with two engines in a linear closed bus configuration, improving efficiency, reducing fuel consumption, and lowering maintenance costs.
- **Scalability and Future Expansion:** The success on the West Saturn sets the stage for wider industry use, promising improved analytics, sustainability, and adaptability across various rigs.

## AGP in the Context of Seadrill Sustainability

Seadrill's commitment to safe, efficient and reliable operations, and environmental responsibility under our Environment, Social, and Governance (ESG) framework enables us to align our activities with the UN Sustainable Development Goals (SDGs). Seadrill has self-reported to the Carbon Disclosure Project (CDP) since 2010 and received an industry-leading B rating in 2024. As we address the major global challenges of climate change, focusing our technology on responsible production and consumption of resources means we can be a positive influencer in the drive towards global sustainability. As part of Seadrill's energy efficiency program, AGP is one more way we are investing in new technologies to reduce costs and GHG emissions for our customers.

## Other Seadrill energy efficiency initiatives include:

- Hydrogen, methanol, and ethanol fuel injection systems as well as advanced fuel processing
- Fuel additives to improve engine combustions
- Driving operational discipline to be more energy efficient through process optimization



Seadrill is setting the standard in deepwater oil and gas drilling. With its modern fleet, experienced crews, and advanced technologies, Seadrill safely, efficiently and responsibly unlocks oil and gas resources for national, integrated, and independent oil companies.

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