

NOV Energy Control

Up to 25%

Fuel Savings

By integrating NOV Energy Control with Rig's Powerplant



Software upgrade cut fuel consumption up to 25%

NOV has installed this upgrade, together with upgrade of Kongsberg VMS system on several rigs, where data indicates that fuel consumption will be reduced by around 2,300 tonnes/year, CO2 emissions by 7,300 tonnes/year and NOx by 125 tonnes/year, equating to an overall saving in fuel and emissions of more than 25% (<https://www.drillingcontractor.org/kongsberg-nov-cosl-partner-to-reduce-emissions-on-offshore-rigs-59246>).

A drill floor consist of several large machinery that need lots of power. The main heavy consumer is the Drawworks, which are capable of pulling about 1.2MW per motor installed. In addition, this power is demanded within a couple of seconds, putting a lot of stress to the generators.

NOV has developed new functionalities to allow shaping of the Drawworks response to match the Rig's powerplant much closer than was previously possible. In addition, better estimates of how much power the Drawworks is expected to use is sent over to the Rig's Vessel Management System. This allow for better planning of starting/stopping generators during operation.

For rigs that have NOV Drilling Power Limit System installed, this is upgraded to latest Maestro™ template. The new Maestro™ is more efficient when it comes to allocate all available power amongst the running drilling machinery.

With the new functionalities, it is possible to run with fewer generators at the cost of slightly reduced acceleration of the Drawworks.

Packages included in NOV Energy Control

Drawworks Joystick S-Curve

S-Shaping joystick speed command to ease load on generators during acceleration. Can be turned off from HMI.

Drawworks Power Rate Of Change upgrade

Allows acceleration of joystick speed command to be shaped by generator response (kW/seconds). Allows to run with fewer generators at the cost of reduced acceleration. Prevent frequency drop due to too fast load change on generators.

Drawworks Dynamic Torque

Allow for un-even load on motors, making the use of all available power on each bus.

Drawworks Prepare Locked To bottom mode

Better interface and handshake between NOV PMS and VMS system. Better estimates of required power based on historical heave data and current hook load.

Upgrade of DPLS to Maestro™

More efficient distribution of available power. All available power is made visible to all machines, avoiding un-neccessary reservation of power.