

January 2022

# Turner ECS Case Study

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## Jack-Up Rig Power Generation Control Upgrade



### Introduction

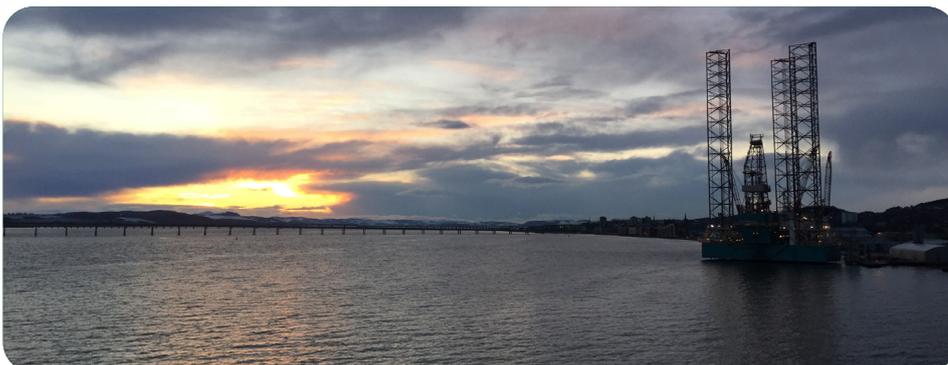
The Gorilla V and Gorilla VII are jack-up rigs that are each powered by five main generators and one emergency generator. When facing obsolescence, Turner ECS was invited to replace the speed and load controllers.

### Hardware Replacement

The 721 and load pulse controllers were replaced by Woodward's free programmable 2300E platform. The 2300E was programmed to cover the same functionality as the 721 and load pulse controller. Woodward's DSLC (digital speed and load control) was replaced by Woodward's flexible EASYGEN genset controller which was configured to replace the functionality of the DSLC with the added benefit of networked visualisation tools.

### Networked System

The new controllers share information over dedicated CAN and Ethernet networks. This network structure allows remote panels to be hooked up to view genset information from various central locations.



### FEATURES

#### Speed Control

- Multiple dynamics
- Manifold air pressure limiter
- Torque limiter
- Low speed sensibility
- Remote speed & load reference
- Soft load transfer
- Automatic idle/rated switching
- Enhanced load rejection
- Adaptive speed sensing

#### Genset control

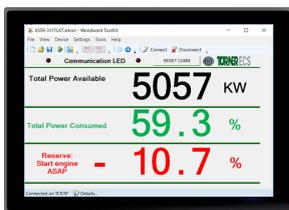
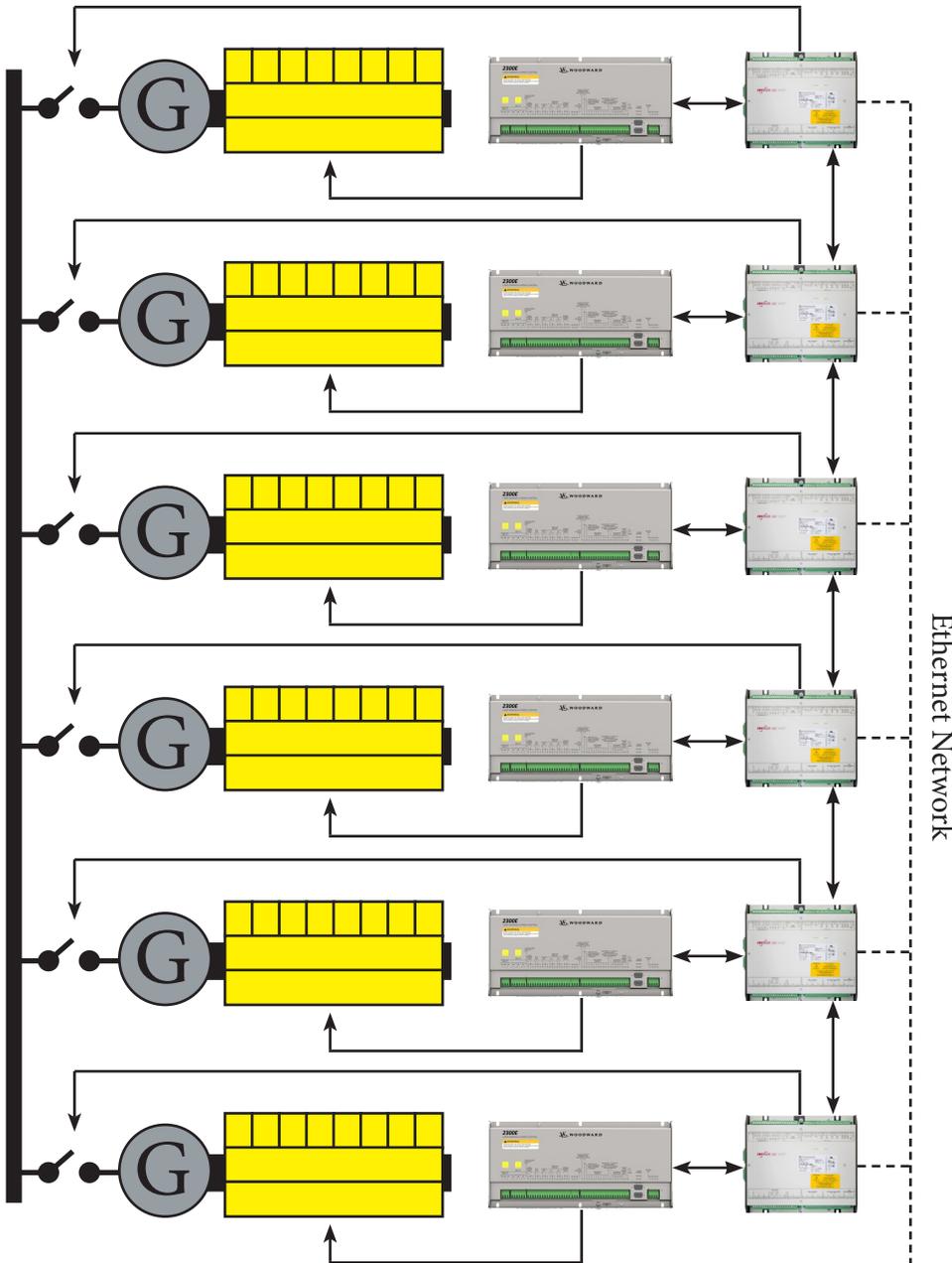
- Peak shaving
- Stand-by operation
- Automatic Mains Failure operation
- Emergency operation
- Import/Export operation
- Islanded & Utility parallel operation
- Generator protection
- Open/closed transition
- Customizable logic

### FACT SHEET

Engine OEM: Caterpillar  
Engine Type: 3608  
Site Name: Gorilla V and VII  
Customer: Rowan Drilling  
Country: United Kingdom

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### System Overview



## Turner Range of Services

**LSTK Projects, Retrofits & Upgrades**  
Turner ECS delivers reliable retrofit solutions for a wide range of prime movers and other applications. This includes lump sum turnkey projects on turbines and compressors.

**Genuine Parts & Service Exchange**  
Turner ECS has the largest stock of parts, service exchange governors and electronics in Europe and can provide a fast turnaround service.

**Product Training**  
Turner ECS can provide official Woodward product training covering both theoretical and practical training on a wide range of Woodward products.

**Electronic Repair & Mechanical Governor Overhaul Service**  
Turner ECS provides a comprehensive overhaul and repair service for electronic, mechanical and hydraulic governors.

**World Wide Field Service**  
Turner ECS field service engineers and technicians provide comprehensive solutions for commissioning and on-site repair.

**Service Contracts**  
Turner ECS provides long term service contracts to support users with Woodward governors and/or control products and electronic control systems.



### ROTATING EQUIPMENT CONTROL SOLUTIONS DELIVERED ACROSS EUROPE & THE MIDDLE EAST

Turner ECS is an official Woodward Channel Partner with offices located in:

- The Netherlands
- England
- Germany
- Italy
- Abu Dhabi
- Qatar
- Saudi Arabia

Turner ECS also operates and manages an extensive network of official agents throughout Europe & the Middle East

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